FOREWORD

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Guest Editor
The Retail and Marketing Review

Nanyang Business School
Nanyang Technological University, Singapore

Special Covid Edition: Volume 16 Issue 3 (2020)

The environment is RUDE:

R – Rapidly changing, and at times, Ruthless

U – Uncertain, and at times, Unpredictable

D – Dynamic, and at times, Disruptive

E – Engaging, and at times, Enabling

It is more so today, than yesterday and tomorrow may be more so, than today. Thought leaders and practitioners in retail and marketing, will need to continuously come out with new ideas, models, frameworks, principles and practices. Innovative thinking and Innovations will be key drivers for sustainability and growth, supported by the 4Ps of the Entrepreneurship Spirit – Purpose; Passion; Perseverance; Principles.

It is timely indeed to have an issue of the Retail and Marketing Review, that addresses some of the most pressing challenges – some of which are expected, such as digitalisation and some of which are unexpected, such as COVID 19 (which none had heard of, just more than a year ago).

The knowledge in the various articles in this issue, is useful not to just cope with the challenges, but also an inspiration for those who wish to turn threats into opportunities.

Challenging times provide us with a greater impetus to review our thoughts and our actions and this journal is an excellent platform for all to share with, and learn from, each other, regardless of whether our opinion converge.

I began this foreword by saying that the environment is RUDE and I end it, by saying that especially in a RUDE environment, competition is not your number one enemy - Status Quo is enemy number one!

Market orientation and market sensing capabilities in a digital world: Relationships and impact on market performance

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ABSTRACT

The paper seeks to understand from a digital world perspective the impact of market orientation and market sensing capabilities on market performance. This is important because market orientation and market sensing capabilities are widely researched and accepted marketing resources. However, their impact in the digital marketing environment remains blurred. A cross sectional survey was therefore conducted from a sample of 298 small to medium enterprise agro-processors in Harare, Zimbabwe. A PLS-SEM was conducted using SmartPLS3. Results of this study provide statistically significant evidence to support the influence of market orientation on market sensing capabilities and market performance. The results further revealed that market orientation indirectly influenced market performance through market sensing capabilities. However, the direct linkage between market orientation and market performance was weak, whilst a strong relationship existed between market orientation and market sensing capability. On the other hand, there was a moderate relationship between market sensing capability and market performance. These results imply that marketers must go beyond market orientation to develop market-sensing capabilities for improved market performance. Market orientation, as an asset, requires marketing capabilities and activities to convert it into profitable market performance outcomes. This study contributes to literature on market orientation, market sensing, market performance and digital marketing.

Keywords: market orientation, digital marketing environment, market performance

INTRODUCTION

The study investigated the influence of market orientation and market sensing capabilities in a digital marketing environment on market performance variables of sales volume, market share and profitability. This topic was selected because digital marketing technology has transformed the way marketing is conducted, yet existing knowledge fails to fully address digital marketing needs (Foltean, 2019). Market orientation and market sensing capabilities are widely researched and accepted marketing resources. However, their impact in the digital marketing environment remains blurred.

Digital marketing technology has changed human lives and consumer interactions, ushering in new digital consumer behaviour (Alrwashdeh, Emeagwali & Aljuhmani, 2019:514; Dey, Yen & Samuel, 2020; Langan, Cowley & Nguyen, 2019:32; Quinton, Canhoto, Molinillo, Pera & Budhathoki, 2018:427). Consumers now live an inextricably

interwoven online and offline life (Kumar, 2018:6). In a digital marketing world, consumers are empowered, have a proactive voice, and seem to challenge anyone and anything.

The Covid-19 pandemic has further shifted consumers to online platforms. African e-commerce received a significant boost from the Covid-19 pandemic lockdowns (Kazeem, 2020). According to Watson (2020), the Internet and social media usage grew significantly during the lockdown period with more than 40 percent of consumers spending more time on messaging services and social media. These market developments require managers who deploy digital marketing technologies to create value in a technological marketing environment (Andotra & Gupta, 2016:806). Therefore, knowledge of digital marketing technology is required to continuously satisfy consumer needs (Gotteland, Shock & Sarin, 2020) and constantly deliver superior market performance in the long run (Gotteland et al., 2020).

Although no single marketing approach exists to deliver market performance, market orientation has been identified as one of the key drivers of market performance (Andotra & Gupta, 2016:807; Narver & Slater, 1990; Kholi & Jaworski, 1990). Market orientation entails a commitment to understand customers' growing needs and satisfying these needs, while outsmarting competitors, to attain a long lasting competitive advantage and increase market performance (Andreou et al, 2020:1). However, despite wide research, there is no agreement on the linkage between market orientation and market performance (Amangala & Wali, 2020). For example, Narver, Slater and Tietje (1998:242) argued, "market orientation is positively associated to market performance in all types of markets". This is notwithstanding that market orientation is contextual (Amangala & Wali, 2020; Andotra & Gupta, 2016:810; Takata, 2016; Kholi & Jaworski, 1990). Therefore, a positive relationship between market orientation and performance is not obvious (Foley & Fahy, 2009). Empirical evidence must be obtained from a particular sector, industry, culture and setting to ensure relevance (Amangala & Wali, 2020; Foley & Fahy, 2009).

Further, Frosen, Luoma, Jaakkola, Tikkanen and Aspara (2016) argued that market orientation does not determine superior market performance although a necessity in all businesses. This suggests that other marketing resources and capabilities are required to attain superior market performance. Thus, market orientation is dependent on other constructs to explain its role in market performance (Foley & Fahy, 2009; Menguc & Auh, 2006). Andotra and Gupta (2016:809) supports this when they argue that although market orientation contributes to competitive advantage, competitive advantage can still be acquired through other means like novel technological advances compounded with effective knowledge integration. Therefore, ideal contexts and contributions of market orientation remain elusive.

Although, the capabilities approach offers an alternative explanation of the attainment and sustenance of market orientation (Day, 1994) different marketing capabilities have different effects on market performance (Hernández-Linares et al, 2020:1; Morgan, Slotegraaf & Vorhies 2009). Therefore, a model of market orientation grounded in market-sensing capabilities could advance understanding of the market orientation construct (Foley & Fahy, 2009).

According to Foley and Fahy (2009:16), market-sensing capability captures the essence of market orientation and better explains the association between market orientation and market performance. Market sensing is a superior market learning capability, which has beneficial effects on market orientation (Day 1999:85). Market learning entails a wider abstraction of market orientation (Slater & Narver, 1995). A distinguished capability to sense the market and capture intelligence is critical, given today's acceleration of markets and digital marketing technological changes, the data deluge, and the importance of proactive and/or preemptive moves in the marketplace. It is therefore important to maintain regularly an awareness of customers' demands and competitors' product offerings (Andotra & Gupta, 2016:808). Market orientation combined with good market-sensing capabilities allow firms to construe the "voice of the market" accurately consequently delivering quality services (Amangala & Wali, 2020: 14; Olavarrieta & Friedmann, 2008).

However, despite the lack of widely accepted empirical evidence of these relationships from a digital marketing perspective, there is no agreement on the linkage between market orientation and market sensing. For example, Foley and Fahy (2004) consider market sensing to be an antecedent of market orientation whilst Day (1994) and Narver and Slater (1990) consider market orientation as the foundation to market sensing. Thus, the relationship between market orientation and market sensing capabilities from a digital marketing environment needs to be explored.

The relationship between market orientation and market sensing from a digital marketing perspective is important because small to medium enterprise (SME) agro-processors in a digital marketing environment must remain relevant to their customers by constantly assessing how to stay market oriented. However, the influence of the digital marketing environment on market orientation is not well understood (Haapio et al, 2019:289). Market orientation in the digital age is the firm's ability to offer a unified and valuable customer experience across all service channels (Haapio et al., 2019:289).

Whilst researchers (Haapio et al., 2019:301; Kholi, 2017; Habibi, Hamilton, Valos, John & Brendan, 2015) agree on the need to review or apply digital marketing technology on the market orientation concept of Kholi and Jaworski (1990) and Narver and Slater (1990), no clear guide exists on the level of review. This leaves a gap in the conceptualisation and empirical application of the concept in a digital marketing environment. This gap widens in Africa because of the limited understanding on the relevance of market orientation in emerging markets (Menguc & Auh, 2006). This is because of a dearth of application of the market orientation concept in the African context, except for a few studies in Ghana and South Africa (Amangala & Wali, 2020). The majority of studies are from large-scale manufacturing, service sector firms and developed markets (Andotra & Gupta, 2016:810).

In Zimbabwe, agriculture is the main pillar of the economy. Therefore, agro-processors are central to connecting farmers and markets, and in the process improving economic growth and livelihoods. The closure of multinational agro-processors left a vacuum closed by SME agro-processors that have close linkages with indigenous farmers and urban markets (Chinakidzwa & Phiri, 2020). This means SME agro-processors are central to the country's economic activities. However, SMEs in Zimbabwe are not immune to challenges generally faced by SMEs in developing countries.

According to Sołek-Borowska (2017:72), SMEs lack resources such as finance, digital infrastructure, skills and the general use of information systems. In Zimbabwe, agro-processors were found to have strong informal linkages with farmers and markets. At the same time, they have poor market access. However, research is mostly limited to general SMEs' challenges such as lack of finance, informality, lack of planning and government policy (Bomani, 2016; Matsongoni & Mutambara, 2018). Whilst market-sensing capabilities remains important for SMEs' improved performance (Alshanty, et al. 2019:734), research in this area remains elusive. From a Zimbabwean perspective, research on SME agro-processors' application of market orientation and market sensing capabilities in a digital marketing environment, remains scarce.

This paper interrogates the relationship between market orientation, market sensing capability and market performance in a digital marketing environment. This objective was achieved through a cross-sectional survey of SME agro-processors in Harare, Zimbabwe. Measurement items used in the study were adapted from previous market orientation and market sensing capability studies to fit the digital marketing environment. The survey questionnaire was distributed to managers and owners of the agro-processors who were knowledgeable about marketing and performance issues. This study contributes to literature on market orientation, market sensing and market performance. The study brings new knowledge on the applicability of market orientation in a digital marketing environment and a developing country perspective. This contributes to the generalisability of knowledge on market orientation, market sensing and market performance. This is important because this kind of research is scarce, and is non-existent in the Zimbabwean context.

The following sections are organized as follows: section 2, theoretical and conceptual framework, section 3 methodology, section 4 data analysis and results, section 5 discussions, section 6 conclusions and implications, and section 7 limitations and further research.

THEORETICAL AND CONCEPTUAL DEVELOPMENT

The theoretical and conceptual sections contribute by discussing market orientation, market sensing capability, the linkage between market orientation and market sensing capabilities, market orientation and market performance, and finally, market sensing capability and market performance. These discussions centre on exploring the limitations of existing literature in providing empirical evidence from a digital marketing context.

Market orientation

Kohli and Jaworski's (1990) and Narver and Slater's (1990) definitions of market orientation dominate the market orientation literature. Kohli and Jaworski (1990: 6) provided a behavioural definition of market orientation as "the organization-wide generation of market intelligence, dissemination of its intelligence across departments, and organization-wide responsiveness to it". This definition captures the essence of a market sensing capability (Day, 1994:43). Another definition by Narver and Slater (1990) considers market orientation as a culture in which all employees are committed to creating superior customer value. Although these two definitions take two different orientations (behavioural and cultural), the definitions agree. The Kholi and Jaworski (1990) and Narver and Slater (1990) market orientation perspectives agree on their dimensions (Amangala & Wali, 2020:3). The collection, distribution, and responsiveness to market intelligence (Kholi & Jaworski, 1990) facilitate the accomplishment of Narver and Slater's (1990) perspectives of customer orientation, competitor orientation and inter-functional coordination that leads to superior customer value. According to Andotra and Gupta (2016:807) and Narver and Slater (1990), superior value is obtained through "customer orientation, competitor orientation and inter-functional coordination". Customer orientation comprises a full understanding of customer demands; together with the expectation of future demands, as market forces change. Competitor orientation centres on understanding competitors or probable competitors' fortes and flaws. The inter-functional role comprises other departments applying customer and competitor information to produce superior customer value. The gathering of market intelligence enables a full comprehension of customers' demands, as well as competitors' strengths and weaknesses. Dissemination and responsiveness allows inter-functional coordination and acting upon the information. Chinakidzwa and Phiri (2020) defined digital market orientation as "a deeply entrenched cultural orientation that calls organisations to focus on creating superior customer value through customer and competitor focus as well as an organisational-wide coordination in the digital environment". Therefore, this study uses market orientation in a digital world to refer to digital market orientation.

While some researchers generally use market orientation and marketing orientation interchangeably (Amangala & Wali, 2020), these two concepts are significantly different. Marketing orientation focuses on activities of the marketing function whilst market orientation emphasises cross-functional information distribution and response to market information. The more an organisation is market oriented, the less it would be marketing oriented (Slater & Narver, 1994). Market orientation is a deeply embedded cultural facet that provides a distinctive resource in firms (Hooley, Cadogan & Fahy, 2005) and constitutes the intangible structural capital (Edvinsson & Sullivan, 1996). Corporate culture guides thinking and actions all over the firm, and assist in the creation of values, norms and behaviours linked to the market (Moorman & Day, 2016; Narver & Slater, 1990:21). However, market orientation can either be responsive or proactive (Gotteland et al., 2020). A responsive market orientation seeks to comprehend and fulfil the articulated needs of customers, while a proactive market orientation seeks to comprehend and to fulfil the dormant or hidden customer needs (Narver & Slater, 1990). The dormant needs are those future needs that customers are not yet conscious of – therefore cannot define them.

The digital marketing environment has challenged the applicability of existing market orientation knowledge. Digital marketing tools are now being used to execute customer orientation, competitor orientation and inter-functional coordination. For example, social media largely detects customer engagement activities. Marketers now make use of virtual communities, blogs, customer reviews and comments to engage customers, gather market and competitor intelligence, and execute social listening. Digital channels have empowered customers to choose what to follow, when, and what to do (Kotler, Kartajaya & Setiawan, 2017). The internet has opened a new era of electronic word of mouth (eWOM) that has the capacity to reach large numbers of networked customers in a short space of time (Alrwashdeh et al., 2019:513). According to Alrwashdeh. et al (2019), eWOM is more significant than brand image in influencing consumer purchase intentions. Thus, market power has shifted from marketers to consumers, and it lies within social groups more than individuals (Kotler et al, 2017:6). However, it remains to be empirically revealed how this power shift influences market orientation, market sensing capabilities and market performance of SME agro-processors.

Market sensing capability

Market sensing capability is an outside-in capability that involves the active collection, interpretation, and distribution of market information (Day, 1994). The market-sensing capability consists of three sub-capabilities: sensing (obtaining of the correct market information); sense making (correct interpretation of market information), and response (the application of obtained insights in decision-making) (Amangala & Wali, 2020). The digital marketing environment demands that firms continuously monitor market changes and predict customer responses so that pre-emptive action is taken (Chinakidzwa & Phiri, 2020). Digital technologies empower marketers to sense and respond effortlessly to market needs (Setia, Venkantesh & Joglekar, 2013). Chinakidzwa and Phiri (2020) conceptualised e-market sensing capability as an imperative, incomparable and difficult to develop resource that stimulates and influences digital marketing and market performance.

SMEs are good in market sensing capabilities. Extant research in the physical marketing environment show that SMEs are close to their customers, making it easy for the SMEs to comprehend their consumers' unambiguous and prominent needs, nurturing the development and provision of products that meet customer needs and wants (Alshanty et al., 2019:733; Ardyan, 2016:84). However, research on market sensing capability in the digital marketing environment, and influence on market performance remains scarce. Further linkages between market orientation and market sensing capabilities from a digital marketing perspective needs exploration. The next section discusses market orientation and market sensing capability.

Market orientation and market sensing capability

There is debate on the classification of market orientation as a capability (Menguc & Ash, 2006). Market orientation and market-sensing capability are often considered as synonymous since they are conceptual related (Day, 1994); however, these two are different constructs (Olivarrieta, 1999). For example, Foley and Fahy (2004) narrowly perceived capabilities as resources that are valuable, inimitable and appropriable, and as such, treated market orientation as a marketing capability. However, market orientation on its own is unlikely to qualify as a dynamic capability (Menguc & Auh, 2006). Instead, market orientation is a valuable, rare and inimitable firm level resource (Day, 1994). A firm must be a moving target (Porter 1985), and this can only occur if a firm has active market sensing capabilities (Menguc & Auh, 2006). Chinakidzwa and Phiri (2020) conceptualised digital market orientation as a digital marketing asset that requires e-market sensing capabilities to execute digital marketing activities and contribute towards market performance. Market orientation reflects a culture that encourages organisational learning (Olavarrieta & Friedmann, 2008) that is exhibited in market sensing capabilities. When market sensing capabilities are deeply entrenched in an organisation, all functional activities and organisational processes will be well focused towards anticipating and responding to fluctuating market demands ahead of competitors (Ahmed et al., 2017; Day, 1994). As a result, market sensing capabilities help in the design of programmes to enhance market orientation (Day, 1994). Market-sensing capabilities empower firms to extract customer preferences that may not be clear in the collected market information (Lankinen, Rokman & Tuominen, 2007). Creating continuous customer value is difficult if a firm cannot recognise and sense new customer needs (Gotteland et al., 2020).

However, the relationships between market sensing capabilities and market orientation remain partially explained. For example, Amangala and Wali (2020) found market sensing capabilities to have no influence on the association between market orientation and customer satisfaction. This is despite the argument that market orientation reposition organisational focus to outside-in tactics through “market sensing and customer linking capabilities” (Day, 2011), thus influencing firm performance (Moorman & Day, 2016; Milfelner, Gabrijan & Snoj, 2008; Hooley et al., 2005). In view of the need to contribute to this discussion, and provide evidence from a digital marketing environment, the following hypothesis was made:

H1 Market orientation positively influences market sensing capabilities.

The following section discusses the linkage between market orientation and market performance.

Market orientation and market performance

Extant research linking market orientation and market performance provides different outcomes. The differences in results could be attributed to different conceptualisations, measures and contexts. For example, one stream of literature provides empirical evidence of the direct positive influence of market orientation on market performance (Andreou et al., 2020:1; Amangala & Wali, 2020; Alshanty et al., 2019; Andotra & Gupta, 2016:807; Kirca, Tsiotsou & Vlachopoulou, 2011; Milfelner et al., 2008; Jayachandran & Bearden, 2005). The other stream found no influence of market orientation on market performance (Gotteland et al., 2020).

In seeking to understand the market orientation and market performance linkage, different market performance conceptualisations exist, for example customer satisfaction (Amangala & Wali, 2020; Kirca et al, 2005), sales (Gotteland et al., 2020), profitability (Chang and Chen, 1998; Day, 1994), customer satisfaction and loyalty (Alshanty et al., 2019; Kirca et al., 2005). Further, extant research shows that the relationship between market orientation and market performance is more pronounced in competitive environments (Andreou et al., 2020:1). Andotra and Gupta (2016:817) also found a moderate link between market orientation and performance. Chang and Chen (1998) established that 'market orientation had a strong and positive influence on both service quality and business profitability'. Milfelner et al. (2008) found market orientation to be a determinant of organisational achievement in new product development and capability to launch successfully new products. A market engrossed culture determines market, financial and innovation results (Moorman & Day, 2016). Tsiotsou and Vlachopoulou, (2011) found that market orientation has a "direct and indirect" effect on market performance. It indirectly affects market performance with e-marketing as an enabling variable. However, evidence of the influence of market orientation in digital marketing environments remains missing, particularly for SME agro-processors. Therefore, the following hypothesis was made:

H2: Market orientation in a digital world positively influences market performance.

Market sensing capability and market performance

The linkage between market sensing capabilities and market performance remains elusive. Researchers continue to find conflicting evidence from different contexts. Three main streams of findings exist: one that provides evidence of a positive influence of market sensing capabilities on market performance; another that found no significant evidence of a positive association; and finally, studies that found an indirect relationship between market sensing capabilities and market performance. For example, Morgan et al. (2009) and Lindblom et al. (2008) found no evidence to support the influence of market sensing capabilities on profit growth. Aligned to these findings, Hernández-Linares et al. (2020), Ardyan (2016:80) and Olavarrieta and Friedmann (2008) found no evidence of the influence of market sensing on overall firm performance.

However, Lindblom et al. (2008) found evidence of a weak positive relationship between market sensing capability and company growth. In relation to the indirect relationship, Ardyan (2016) found market sensing capabilities to have a significant effect on speed to market and innovativeness.

In the third stream of results, Ahmed et al. (2017); Osakwe et al. (2016) and Sugiyarti and Ardyan (2017) found market sensing capability to significantly contribute to SME profitability and market performance. Further, Alshanty et al. (2019:73) found that market sensing capabilities are important for SMEs' improved performance that relies on learning-positioning. Good market sensing capabilities contribute to knowledge creation in SMEs (Alshanty et al., 2019:733). Considering that SMEs have a tendency to have great personal connections with their customers (Hernández-Linares et al., 2020:8; Mhazo et al., 2012), market sensing may not create an exceptional or limited capability, but one that results in improved market performance only when complemented with extra resources

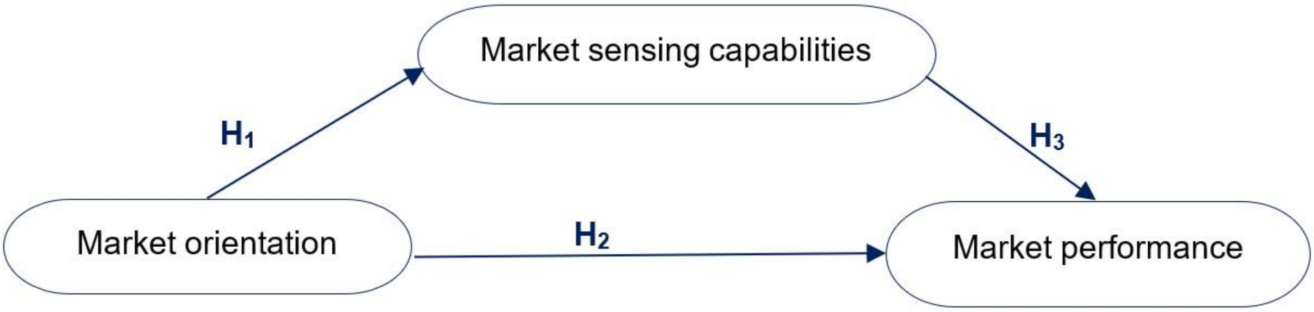
(Hernández-Linares et al., 2020:8). These disparities call for more evidence from a different context. Therefore, the following hypotheses were made:

H3 Market sensing capability influences market performance.

H4 Market sensing capabilities mediate the relationship between market orientation and market performance

Conceptual model

FIGURE 1
CONCEPTUAL MODEL



Source: Authors' own

Model Overview

The conceptual model summarises the relationships hypothesised in the previous sections. It shows that market orientation influences both market sensing capabilities and market performance. Market sensing capabilities then influence market performance. Market sensing capabilities mediate the relationship between market orientation and market performance.

METHODOLOGY

Context: The study was conducted in Harare, Zimbabwe. Respondents were drawn from SME agro-processors that were based in Harare. Harare was ideal for the study because of its capital city status and its high intensity of industrial activities. Internet connectivity, mobile penetration and financial inclusion are also high which made it reasonable to conduct digital marketing related research.

Measurement scale: Constructs and measurement items for the study were adapted from previous literature (Kholi & Jaworski, 1990; Narver et al., 1998; Morgan et al., 2009; Vorhies & Morgan, 2005; Kirca et al., 2005; Sugiyarti & Ardyan, 2017). This helped obtain construct validity. Market orientation was based on questions adapted from Kholi and Jaworski (1990) and Narver et al. (1998) and the questions were linked to customer orientation, competitor orientation and inter-functional orientation. Market sensing capabilities questions were adapted from Morgan et al. (2009) and Vorhies and Morgan (2005) and questions addressed issues related to sensing, sense making and response. Market performance questions related to profitability, sales volume and market share, and were adopted from Kirca et al. (2005) and Sugiyarti and Ardyan (2017). A Likert scale was used on all the questions. The scale on market orientation and market performance ranged from 1–7 (completely disagree to completely agree) whilst the one for market sensing ranged from 1–5 (strongly disagree to strongly agree). For a detailed definition of measurement scales, refer to Appendix 1.

Pilot testing: The questionnaire was pilot tested in two phases. In the first phase it was distributed to colleagues in the field of marketing research. This helped with face and expert validity. In the second phase, it was distributed to manufacturing SMEs who were chosen by the researcher using convenience sampling. Corrections to the flow of questions, clarity and typing errors were made after the pilot testing.

Sample Size and Sampling: A sample of 298 respondents was drawn from SME agro-processors in Harare. SME agro-processors' marketing managers, owners or senior executives in charge of marketing constituted the target sample. These were chosen for their deep insights about marketing and performance issues. Managers are critical in the implementation of market orientation because they have to identify and appreciate the value of market orientation and be able to communicate the value to all other employees (Kholi & Jaworski, 1990). Only one respondent per SME was chosen. A mixed sampling approach of stratified and quota sampling was adopted. This was necessary because a complete sampling frame could not be established in some agro-processors. Therefore, quota sampling was applied where no complete lists existed. Refer to Appendix 2 for detailed sample definition.

Data collection: Quantitative data was collected using a closed-ended questionnaire. The questionnaire was administered using the ‘drop and pick’ approach. Respondents were first called or emailed (where contacts existed) and told about the questionnaire. However, where no prior contacts existed, respondents were visited at their workplaces. The establishment of contact before visiting enabled a good rapport between the respondent and researcher, since the respondent identified slots that he/she would be available.

DATA ANALYSIS AND RESULTS

A total of 298 usable questionnaires were received. The data was captured on a Microsoft Excel spreadsheet which was later uploaded to the SmartPLS3.2.1. Through the SmartPLS3.2.1 software, a partial least squares (PLS) structural equation modelling (SEM) was conducted. The SmartPLS3.2.1 software assesses the psychometric properties of the measurement model, and estimates the parameters of the structural model. The PLS-SEM was ideal in this study because of its high statistical power which is useful in a less developed or developing theory (Hair et al., 2019).

The results are presented in two sections: 1) measurement model assessment and 2) structural model assessment. In the measurement model assessment, results of indicator loadings, reliability tests (composite reliability), convergent validity and discriminant validity are shown. In the structural model assessment, collinearity tests, results of the coefficient of determination (R^2) and statistical significance are shown. It was important to follow these steps because the measurement model must be satisfactory before assessing the structural model (Hair et al, 2019:8).

Measurement model assessment

Results to assess the measurement model are presented in the sections 4.1.1 to 4.1.4.

Indicator loadings

The factor loadings (and cross loadings) of all indicator items to their respective latent constructs are shown in Table 1.

TABLE 1
FACTOR LOADINGS (BOLD) AND CROSS LOADINGS

	Market orientation	Market sensing capability	Market performance
MO1	**0.516**	0.273	0.340
MO2	**0.524**	0.300	0.320
MO3	**0.769**	0.468	0.440
MO4	**0.621**	0.363	0.371
MO5	**0.843**	0.598	0.390
MO6	**0.941**	0.590	0.520
MO7	**0.977**	0.602	0.550
MS1	0.617	**0.933**	0.553
MS2	0.576	**0.878**	0.525
MS3	0.438	**0.751**	0.502
MS4	0.482	**0.848**	0.579
MkS	0.505	0.587	**0.920**
Prof	0.476	0.550	**0.864**
Sal	0.550	0.600	**0.967**

Recommended loadings are those above 0.70 as they show that the construct describes more than 50 per cent of the indicator's variance; therefore provide an acceptable item reliability (Hair et al., 2019:8). However loadings of 0.60 are acceptable in exploratory research (Hair et al., 2019:15). The results in Table 1 show all items loaded on their corresponding constructs (bolded factor loadings) from a lower bound of 0.60 to an upper bound of 0.97, except for MO1 and MO2. Again, the items loaded higher on their respective construct compared to any other construct (i.e. the non-bolded factor loadings in any one row). Although MO1 and MO2 were below the recommended factor loadings, they were left in the model because they satisfied other quality tests.

Reliability tests: Composite reliability

Internal consistency reliability was assessed by composite reliability. The Cronbach's alpha was not used because it is a less precise measure of reliability, as the items are unweighted (Hair et al., 2019:8). According to Hair et al., (2019:8), when assessing composite reliability, high values essentially show high levels of reliability. Accordingly, reliability values ranging from 0.60 and 0.70 are regarded as "acceptable in exploratory research," and values ranging 0.70 and 0.90 are considered "satisfactory to good". Values above 0.95 and higher are considered problematic because they show item redundancy, thereby reducing construct validity. These high values may also indicate other problems, such as straight lining, which trigger inflated correlations.

The results for internal consistency reliability assessments are shown in Table 2.

TABLE 2
COMPOSITE RELIABILITY, CORRELATIONS AND DISCRIMINANT VALIDITY

Latent variables	Composite Reliability	Average Variance Extracted (AVE)	Market orientation	Market performance	Market sensing capability
Market orientation	0.902	0.581	**0.762**		
Market performance	0.941	0.842	0.557	**0.918**	
Market sensing capability	0.915	0.731	0.622	0.631	**0.855**

The results in Table 2 indicate that items measured well on the composite reliability and the average variance extracted (AVE) tests. The composite reliabilities of the different measures in the model range from 0.90 to 0.94, which surpassed the acclaimed threshold value of 0.70 (Nunnally, 1994) and are less than the problematic range of 0.95 and above (Hair et al., 2019:8).

Convergent validity

The AVE tests were conducted to give proof for convergent validity (Fornell & Larcker, 1981). Convergent validity refers to the model's ability to explain the indicator's variance. Bagozzi and Yi (1991) suggest an AVE threshold level of 0.5 as a signal of convergent validity. This means the construct describes at least 50 percent of the variance of its items (Hair et al., 2019). Therefore, measures of the three 'reflective constructs' can be said to have high levels of convergent validity, as shown in Table 2.

Discriminant validity

According to Fornell and Larcker (1981), discriminant validity is 'the degree to which a construct is empirically different from other constructs in the structural model'. Fornell and Larcker (1981) proposed that "each construct's AVE should be matched to the squared inter-construct correlation (as a measure of shared variance) of that same construct and all other reflectively measured constructs in the structural model". The shared variance for all model constructs must not be higher than their AVEs. An acceptable AVE should be "0.50 or higher, indicating that the construct explains at least 50 per cent of the variance of its items" (Hair et al., 2019:8).

The results for discriminant validity tests are shown in Table 2. Consistent with the recommendations of Fornell and Larcker (1981) and Hair et al, (2019:8), the AVE for each measure exceeds 0.50 thus providing evidence of discriminant validity. Further, all the square root values of AVE were larger than their corresponding correlations, and therefore met the discriminant validity test, as prescribed by the Fornell-Larcker Criterion. The bolded elements in the matrix diagonals, signifying the square roots of the AVEs, are larger in all cases than the off-diagonal elements in their matching row and column, supportive of the discriminant validity of the scales.

However, discriminant validity assessment such as Fornell-Larcker Criterion and (partial) cross-loadings, have been criticised for largely failing to detect a lack of discriminant validity (SmartPLS, 2020; Henseler et al., 2015). According to Henseler et al. (2015), the heterotrait-monotrait ratio of correlations (HTMT) provides superior performance to the Fornell-Larcker criterion and the assessment of cross loadings. As such, constructs were further subjected to the HTMT criterion. The HTMT is defined "as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct" (Hair et al., 2019:9). According to Hair et al. (2019:9), discriminant validity problems are present when HTMT values are high. HTMT recommended values should "be <0.90 for conceptually similar constructs and <0.85 for conceptually different constructs" (Hair et al., 2019:15). The results indicated that all the constructs have HTMT values ranging from 0.5 to 0.6 (less than 0.9) and as such confirmed the presence of discriminant validity.

Structural model assessment

The results for structural model assessment are presented in the following sections 4.2.1 to 4.2.3.

Collinearity tests

According to Hair et al. (2019:11) variance inflation factor (VIF) values above 5 are indicative of probable collinearity issues among the predictor constructs. Hair et al. (2019:11) further suggested that even lower VIF values of 3–5 may indicate collinearity problems and as such, recommended values close to 3 or lower. The results of collinearity tests using the VIF criterion showed that all the constructs have VIF values <2, thus collinearity was not a problem in the study.

Coefficient of determination (R^2)

As collinearity was not an issue, the R^2 value of endogenous constructs was examined. The R^2 ranges from 0 to 1, with high values indicating a larger explanatory power. R^2 values of 0.75, 0.50 and 0.25 are regarded as substantial, moderate and weak respectively. However, the interpretation of R^2 is contextual (Hair et al., 2019:11).

The results indicated that in terms of explanatory power, market orientation had an explanatory power of 38.7% on market sensing capability (R^2=0.387) whilst the two constructs had a combined explanatory power of 44.2% on market performance (R^2=0.442).

Further, the results showed that, market sensing capability had an f^2 coefficient of 0.237 on market performance indicating a medium effect size. Market orientation had an f^2 coefficient of 0.079 on market performance indicating a small effect size whilst having an f^2 coefficient of 0.631 on market sensing capability indicating a large effect size. F^2 values higher than 0.02, 0.15 and 0.35 represent small, average and big f^2 effect sizes (Cohen, 1988 cited by Hair et al., 2019).

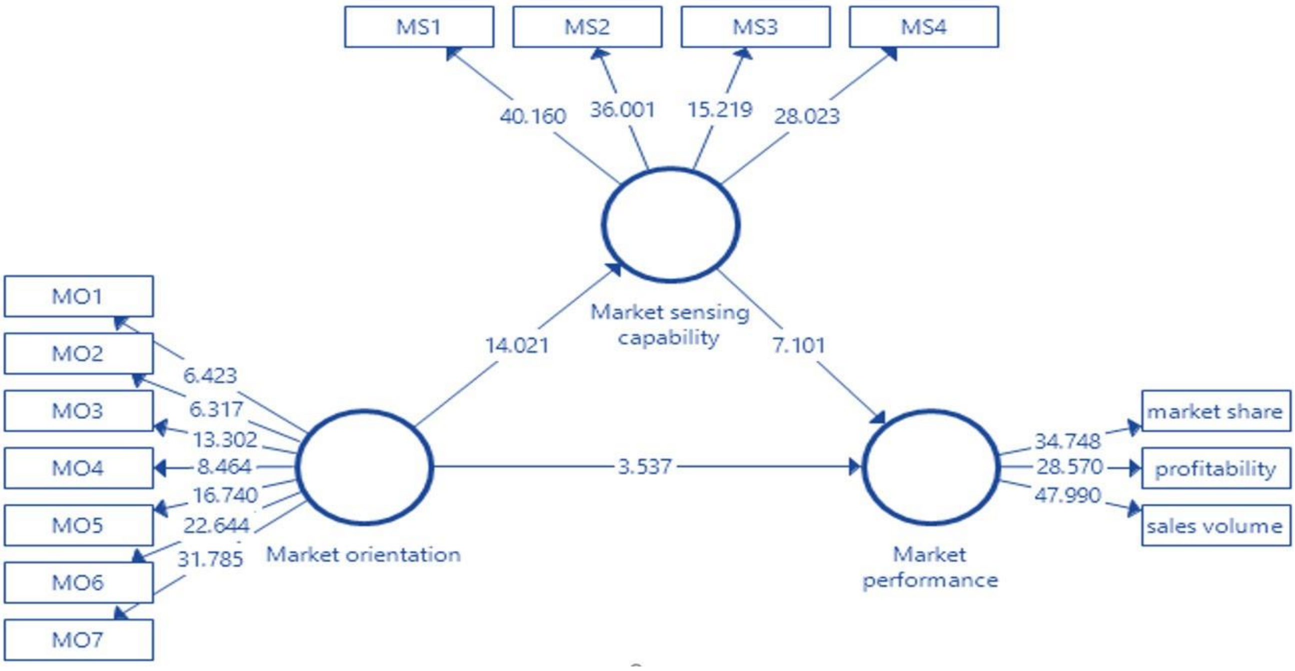
Hypothesis Testing: Statistical significance

Figure 2 shows results of the PLS-SEM. The model shows that market orientation and market sensing capability influence market performance.

The results in Table 3 also support Figure 2. Market orientation exhibited a statistically significant influence ($t=14.02$, $p<0.001$) on market sensing capability, whilst market sensing capability exhibited a statistically significant influence as well ($t=7.10$, $p<0.001$) on market performance. Market orientation had a statistically significant influence ($t=3.537$, $p<0.001$) on market performance. Finally, market sensing capability has a statistically significant mediating effect between market orientation and market performance ($t=7.109$, $p<0.001$).

The results show that all tested hypotheses were accepted.

FIGURE 2
STRUCTURAL MODEL RESULTS



Source: Authors own from data analysis

TABLE 3
SUMMARY: SIGNIFICANCE TESTING RESULTS OF THE STRUCTURAL MODEL PATH COEFFICIENTS

Hypothesis	Path	Path Coefficients	t Values	p Values	Decision
H_1	MO -> MS	0.622	14.021	0.001	Accepted
H_2	MO -> MP	0.269	3.537	0.001	Accepted
H_3	MS -> MP	0.464	7.101	0.001	Accepted
H_4	MO -> MS -> MP	0.289	7.109	0.001	Accepted

*MO=Market orientation *MS=Market sensing capability *MP=Market performance

DISCUSSION

Market orientation is an important determinant of market performance in the digital marketing world. The study revealed that market orientation significantly statistically influences market sensing capabilities in the digital marketing world. The influence of market orientation on market sensing capabilities was strong compared to the influence of market orientation on market performance. These results support previous studies by Amangala and Wali (2020), Alshanty et al. (2019), Kirca et al. (2005) and Tsiotsou and Vlachopoulou (2011) who found market orientation to have both a direct and indirect effect on market performance. However, although market orientation directly influences market performance, the effect was weak compared to the influence of market orientation through market sensing capabilities (indirect effect). The empirical evidence on the relationships between market orientation, market sensing and market performance supports the argument that market orientation is a resource that must be applied to marketing capabilities for improved market performance (Chinakidzwa & Phiri, 2020; Day, 1994; Day, 2011; Olavarrieta & Friedmann, 2008; Moorman & Day, 2016; Milfelner et al., 2008; Hooley et al., 2005).

Another important finding in this study was that market sensing capabilities positively influence market performance, and the influence was stronger than that of market orientation on market performance. This empirical evidence is contrary to Lindblom et al's (2008) findings that there was a weak positive relationship between market sensing capability and company growth. Instead, we found a weak relationship between market orientation and market performance. Our findings support Osakwe et al's (2016) and Sugiyarti and Ardyan's (2017) findings that market sensing capability contributes significantly to SME profitability and market performance. These findings contradict Morgan et al. (2009) and Lindblom et al. (2008) who found no evidence to support the influence of market sensing capabilities on profit growth and overall firm performance (Ardyan, 2016; Olavarrieta & Friedmann, 2008).

The study has contributed to literature by providing empirical evidence on the direct linkage between market orientation and market sensing capabilities. Another contribution is the linkage of market orientation and market sensing to market performance in a digital world. The paper further contributes to literature by extending the market orientation, market sensing and market performance discussion to the digital marketing environment, in a developing market. Particularly the results indicated that market orientation and market sensing are crucial for SME agro-processors in Zimbabwe as they engage in digital marketing.

CONCLUSIONS AND IMPLICATIONS

In the digital marketing world, market orientation influences market sensing capabilities and market performance. Therefore market orientation is an important market performance determinant that digital marketers must always develop. The market orientation – market performance linkage is however strong when mediated by market sensing capabilities. These conclusions imply that SME agro-processors must develop strong market orientation resources, and aim to influence market performance through development of market sensing capabilities. Ignoring the market sensing capability route would be futile as the direct market orientation – performance route is weak and therefore leads to less impact on market performance. Market orientation and market sensing capabilities remain relevant in a digital marketing context, and should be developed. SME agro-processors must always use digital marketing tools such as social media platforms to execute market sensing capabilities and to fulfill market orientation. For example, using social media, marketers can engage in social listening, intelligence gathering and co-creation activities and thus fulfill market sensing and market orientation. The government and industry support bodies including SME organisations, must create an enabling digital marketing environment. This includes digital infrastructure development, empowering agro-processors with digital skills for enhanced market sensing capabilities. Digital is no longer an option, instead it is the critical new driver of competitiveness and value creation.

LIMITATIONS AND FUTURE RESEARCH

As with every study, our study has its own limitations. First, the use of self-reported measures can be affected by response bias. Respondents tend to report what they think the researcher may want to hear. Responses are subject to respondent perceptions which might be different from actual market performance outcomes. The use of actual quantifiable performance data would have been ideal. Secondly, a cross-sectional study cannot truly identify market performance outcomes. Although arguably digital marketing must bring instant results, sales volume, market share and profitability take time to build. Instead, measures that could be easily and directly linked to certain digital marketing activities would have been ideal. Thirdly, the linkage between market orientation, market sensing and market performance remains elusive. There is a need for more studies in different contexts and industries. In addition, there is a need to test the linkage between market orientation and other marketing capabilities in a digital marketing context.

REFERENCES

Ahmed, A. M., Ibrahim, S. B., & Hasaballah, A. H. (2017). Market sensing, innovation capability and market performance: The moderating role of internal information dissemination. International Journal of Advanced and Applied Sciences, 4(8), 56-67.

Alrwashdeh, M., Emeagwali, O. L., & Aljuhmani, H. Y. (2019). The effect of electronic word of mouth communication on purchase intention and brand image: An applicant smartphone brands in North Cyprus. Management Science Letters, 9, 505-518.

Alshanty, A. M., Emeagwali, O. L., Ibrahim, B., & Alrwashdeh, M. (2019). The effect of market-sensing capability on knowledge creation process and innovation. Evidence from SMEs in Jordan. Management Science Letters, 9, 727-736.

Amangala, E. A., & Wali, A. F. (2020). Market orientation, service quality perception, and customer satisfaction: The role of market sensing capabilities. Businesss Perspectives and Research, 1-16.

Andotra, N., & Gupta, R. (2016). Impact of environmental turbulence on market orientation-business performance relationship in SSIs. Global Business Review, 17(4), 806-820.

Andreou, P. C., Harris, T., & Philip, D. (2020). Measuring Firms' Market Orientation Using Textual Analysis of 10-K Filings. British Journal of Management, 00, 1-24.

Ardyan, E. (2016). Market sensing capability and SMEs performance. The mediating role of product innovativeness success. Business and Economics Review, 25(2), 79-97.

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organisational research. Administrative Science Quarterly, 36, 421-458.

Bomani, M. (2016). Government policies and strategies in dealing with challenges confronting small and medium enterprises: a case of Harare, Zimbabwe. Pietermaritzburg: University of KwaZulu-Natal [Unpublished PhD thesis].

Chang, T.-Z., & Chen, S.-J. (1998). Market orientation, service quality and business profitability: a conceptual model and empirical evidence. Journal of Services Marketing, 12(4), 246-264.

Chinakidzwa, M., & Phiri, M. (2020). Exploring digital marketing resources, capabilities and market performance of small to medium agro-processors. A conceptual model. Journal of Business and Retail Management Research, 14(2), 1-14.

Day, G. S. (1994). The Capabilities of Market-Driven Organizations. Journal of Marketing, 58(4), 37-52.

Dey, B. L., Yen, D., & Samuel, L. (2020). Digital consumer culture and acculturation. International Journal of Information Management, 51.

Edvinsson, L., & Sullivan, P. (1996). Developing a Model for Managing Intellectual Capital. European Management Journal, 14(4), 356-364.

Foley, A., & Fahy, J. (2004). Towards a further understanding of the development of market orientation in the firm: a conceptual framework based on the market sensing capability. Journal of Strategic Marketing, 12, 219-230.

Foley, A., & Fahy, J. (2009). Seeing market orientation through a capabilities lens. European Journal of Marketing, 43(1/2), 13-20.

Foltean, F. S. (2019). Bridging marketing theory - practice gap to enhance firm performance: Introduction to the special issue. Journal of Business Research., 104, 520-528.

Fornell, C., & Larcker, D. F. (1981). Sructural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of Marketing Research, XVIII, 382-8.

Frosen, J., Luoma, J., Jaakkola, M., Tikkanen, H., & Aspara, J. (2016). What Counts Versus What Can Be Counted: The Complex Interplay of Market Orientation and Marketing Performance Measurement. Journal of Marketing, 80, 60-78.

Gotteland, D., Shock, J., & Sarin, S. (2020). Strategic orientations, marketing proactivity and firm market performance. Industrial Marketing Management.

Haapio, H., Karjaluoto, H., & Mero, J. (2019). This is a self-archived ve Antecedents of Market Orientation in The Banking Sector During Its Digital Transformation. BLED, Slovenia: University of Maribor Press.

Habibi, H., Hamilton, F., Valos, C. A., John, M., & Brendan, M. (2015). E-marketing orientation and social media implementation in B2B marketing. European Business Review, 27(6), 1-18.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. R. (2019). When to use and how to report the results of PLS-SEM. European Business Review, 31(1), 2-24.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy Marketing Science, 43, 115-135.

Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2020). Dynamic capabilities and SME performance: The moderating effect of market orientation. Journal of Small Business Management, 1-34.

Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2020). Dynamic capabilities and SME performance: The moderating effect of market orientation. Journal of Small Business Management, 1-34.

Hooley, G., Cadogan, G., & Fahy, J. (2005). The performance impact of marketing resources. Journal of Business Research, 58, 18-27.

Kazeem, Y. (2020). African e-commerce is getting a much needed boost from coronavirus lockdowns. Retrieved August 21, 2020, from https://qz.com/africa/1855227/africas-e-commerce-boosted-by-coronavirus-lockdowns/

Kholi, A. K. (2017). Marketing orientation in a digital world. Global Business Review, 18(3), 203-205.

Kholi, A. K., & Jaworski, B. J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. Journal of Marketing, 54(2), 1-18.

Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market Orientation:A Meta-Analytic Review and Assessment of Its Antecedents and Impact on Performance. Journal of Marketing, 69, 24-41.

Kotler, P., Kartajaya, H., & Setiawan, i. (2017). Marketing 4.0: Moving from traditional to digital. New Jersey: Wiley & Sons.

Kumar, V. (2018). Transformative marketing: The next 20 years. Journal of Marketing, 82, 1-12.

Langan, R., Cowley, S., & Nguyen, C. (2019). The state of digital marketing in academia: An examination of marketing curriculum's response to digital disruption. Journal of Marketing Education, 41(1), 32-46.

Lindblom, A. T., Olkkonen, R. M., Mitronen, L., & Kajalo, S. (2008). Market sensing capability and business performance of retail enterpreneurs. Contemporary Management Research, 4(3), 219-236.

Matsongoni, H., & Mutambara, E. (2018). An assessment of informal SMEs' potential in an African economy - theoretical and conceptual framework. Public and Municipal Finance, 7(2), 6-17.

Menguc, B., & Auh, S. (2006). Creating a firm-level dynamic capability through capitalising on market orientation and dynamic capabilities. Journal of the Academy of Marketing Sciences, 34(1), 63-73.

Mhazo, N., Mvumi, B. M., Nyakudya, E., & Nazare, R. M. (2012). The status of the agro-processing industry in Zimbabwe with particular reference to small- and medium-scale enterprises. African Journal of Agricultural Research , 7(11), 1607-1622.

Miles, M. P., & Arnold, D. R. (1991). The relationship between marketing orientation and entrepreneurial orientation. Enterpreneurship Theory and Practice, 91-154.

Milfelner, B., Gabrijan, V., & Snoj, B. (2008). Can marketing resources contribute to company performance? Organizacija, 41(1), 3-13.

Moorman, C., & Day, G. S. (2016). Organising for marketing excellence. Journal of Marketing, 80, 6-35.

Morgan, N. A., Slotegraaf, R. A., & Vorhies, D. W. (2009). Linking marketing capabilites with profit. International Journal of Research in Marketing, 26, 284-293.

Narver, J. C., & Slater, S. F. (1990). The effects of market orientation on business profitability. Journal of Marketing, 54, 20-35.

Narver, J. C., Slater, S. F., & Tietje, B. (1998). Creating a market orientation. Journal of Market Focused Management, 2, 241-255.

Nunnally, J., & Bernstein, I. (1994). Psychometric theory (3rd ed.). New York: McGraw-Hill.

Olavarrieta, S., & Friedmann, R. (2008). Market orientation, knowledge related resources and firm performance. Journal of Business Research.

Osakwe, C. N., Chovancova, M., & Ogbonna, B. U. (2016). Linking SME profitability to brand orientation and market sensing capability: A service sector evidence. Periodica Polytechnica Social and Management Sciences, 24(1), 34-40.

Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2018). Conceptualising a digital orientation: antecedents of supporting SME performance in the digital economy. Journal of Strategic Marketing, 26(5), 427-439.

Setia, P., Venkantesh, V., & Joglekar, S. (2013). Leveraging digital technologies: How information quality leads to localised capabilities and customer service performance. MIS Quarterly, 37(2), 565-590.

Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation - performance relationship? Journal of Marketing, 58, 46-55.

Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organisation. Journal of Marketing, 59, 63-74.

SmartPLS. (2020). HTMT - A New Criterion to Assess Discriminant Validity. Retrieved May 18, 2020, from https://www.smartpls.com/documentation/videos/htmt-a-new-criterion-to-assess-discriminant-validity

Sołek-Borowska, C. (2017). Knowledge creation processes in small and medium enterprises: A Polish perspective. Online Journal of Applied Knowledge Management, 5(2), 61-75.

Sugiyarti, G., & Ardyan, E. (2017). Market sensing capability and product innovation advantages in emerging markets: The case of market entry quality and marketing performance of Batik industry in Indonesia. Business and Economics Review, 27(1), 175-189.

Takata, H. (2016). Effects of industry forces, market orientation, and marketing capabilities on business performance: An empirical analysis of Japanese manufacturers from 2009 to 2011. Journal of Business Research.

Tsiotsou, R. H., & Vlachopoulou, M. (2011). Understanding the effects of market orientation and e-marketing on service performance. Marketing Intelligence & Planning, 29(2), 141-155.

Vorhies, D. W., & Morgan, N. A. (2005). Benchmarking marketing capabilities for sustainable competitive advantage. Journal of Marketing, 69, 80-94.

Watson, A. (2020). Consuming media at home due to the coronavirus worldwide 2020, by country . Retrieved August 21, 2020, from https://www.statista.com/statistics/1106498/home-media-consumption-coronavirus-worldwide-by-country/

Sixth Edition. Boston, Massachusetts: Cengage Learning.

Muhwati, C. and Salisbury, R. H. 2017. Agility in a South African fashion industry supply chain. Journal of Contemporary Management, 14, pp 864 –892.

Nagurney, A. & Yu, M. 2012. Sustainable fashion supply chain management under oligopolistic competition and brand differentiation. International Journal of Production Economics, 135(2): 532-540.

Nenni, M. E., Giustiniano, L. & Pirolo, L. 2013. Demand forecasting in the fashion industry: A review. International Journal of Engineering Business Management, 5, doi: 10.5772/56840.

Nucamendi-Guillén, S., Moreno, M.A., and Mendoza, A. 2018. A methodology for increasing revenue in fashion retail industry A case study of a Mexican company. International Journal of Retail & Distribution Management, 46(8): 726-743.

Rakićević, Z. & Vujošević, M. 2015. Focus forecasting in supply chain: The case study of fast moving customer goods company in Serbia. Serbian Journal of Management, 10(1): 3-17.

Raza, D. N. & Kilbourn, P. J. 2017. The impact of point-of-sale data in demand planning in the South African clothing retail industry. Journal of Transport and SCM, 11: 1-8.

Saunders, M., Lewis, P. & Thornhill, A. 2016. Research Methods for Business Students. Seventh Edition. Harlow, United Kingdom: Prentice Hall.

Shen, B., Qian, R & Choi, T-M. 2017. Selling luxury fashion online with social influences considerations: Demand changes and supply chain coordination. International Journal of Production Economics, 185: 89-99.

Statistics South Africa (StatSA), 2015. Retail trade industry 2015. Report No. 62-01-02 (2015). Available: http://www.statssa.gov.za/publications/Report-62-01-02/Report-62-01-022015.pdf. Accessed 12 June 2020.

Sukati, I., Hamid, A. B., Baharum, R., & Yussoff, R. 2012. The study of supply chain management strategy and practices on supply chain performance. Procedia Social and Behavioural Sciences, 40: 225-233.

Szozda N. & Werbińska-Wojciechowska S. 2013. Influence of the demand information quality on planning process accuracy in supply chain: Case studies. Log Forum, 9(2): 73-90.

Taljaard, H., Sonnenberg, N. C., & Jacobs, B. M. 2018. Factors motivating male consumers' eco-friendly apparel acquisition in the South African emerging market. International Journal of Consumer Studies, 42: 461–468.

Thomassey, S. 2010. Sales forecasts in clothing industry: The key success factor of the supply chain management. International Journal of Production Economics, 128(2): 470-483.

van Niekerk, H. C. 2018. An integrated supply chain programme for the South African cotton garment industry – Pilot Study. Masters Thesis. Stellenbosch University. Available: https://scholar.sun.ac.za/handle/10019.1/103403. Accessed 22 July 2020.

Wen, X., Choi, T-M. & Chung, S.-H. 2019. Fashion retail supply chain management: A review of operational models. International Journal of Production Economics, 207: 34–55.

White, G. 2017. Quick response inputs and outcomes in the apparel industry: an example from a South African retailer. Masters Thesis. University of Cape Town. Available: http://hdl.handle.net/11427/25530. Accessed 22 July 2020.

Xiao, T. & Jin, J. 2011. Coordination of a fashion apparel supply chain under lead-time-dependent demand uncertainty. Production Planning & Control, 22(3): 257-268.

Xu, K., Dong, Y. & Xia, Y. 2015. Too little or too late: The timing of supply chain demand collaboration. European Journal of Operational Research, 241(2): 370-380.

Yu, Y., Choi, T-M. & Hui, C. L. 2011. An intelligent fast sakes forecasting model for fashion products. Expert Systems with Applications, 38. 7373-79.

Zepeda, P. & Valenzuela, K. 2012. Demand planning process for chilled dairy products. In IIE Annual Conference Proceedings, 1-7.

Zhao, Y., Choi, T-M., Cheng, T.C.E. and Wang, S. 2017. Supply option contracts with spot market and demand information updating. European Journal of Operational Research, 266(3): 1062-1071.

APPENDIX 1

QUESTIONNAIRE MEASUREMENT ITEMS

Market orientation measurement items

"How well do the following statements describe your company?"

	[7 point scale (1=completely disagree (CD) to 7=completely agree (CA)]	CD	⟷					CA
MO1	Our business objectives are driven by online customer satisfaction.	1	2	3	4	5	6	7
MO2	Top management regularly contact important customers.	1	2	3	4	5	6	7
MO3	Managers understand how employees contribute to value for customers.	1	2	3	4	5	6	7
MO4	Customers are targeted when we have an opportunity for competitive advantage.	1	2	3	4	5	6	7
MO5	We achieve rapid response to competitor actions using digital channels.	1	2	3	4	5	6	7
MO6	Top management regularly discuss competitors' strengths and weaknesses.	1	2	3	4	5	6	7
MO7	Functions are integrated to serve markets.	1	2	3	4	5	6	7

Market sensing capabilities measurement items

	[5 point scale: 1=strongly disagree (SD) to 5=strongly agree (SA)]	SD	D	N	A	SA
MS1	We actively track key e-market conditions and activities.	1	2	3	4	5
MS2	We always study e-marketing actions and activities of leading organizations in our sector.	1	2	3	4	5
MS3	We study direct competitors to emulate their moves.	1	2	3	4	5
MS4	We accurately anticipate (tell in advance) responses to actions that we take.	1	2	3	4	5

Market performance measurement items

"Please indicate your firm's performance over the last year relative to competitors in the primary market that you serve"

	[1 = "very poor (VP)" to 7 = "outstanding (O)"]	VP	⟷					O
7.3.1	Sales volume	1	2	3	4	5	6	7
7.3.2	Market share	1	2	3	4	5	6	7
7.3.4	Profitability	1	2	3	4	5	6	7

APPENDIX 2

SAMPLE DEFINITION

Major Agro-processor Classifications	Sample Size	Sampling Approach Used	Justification
Manufacture of food & beverage products	215	Mixed: 1) Simple random sampling for Millers & Stock feed manufacturers (60 selected). 2) Quota Sampling for all other manufacturers (155 selected).	Sampling frame partly available – available for millers and stock feed manufacturers only.
Manufacture of wood, wood related products and furniture.	138	Quota sampling	Sampling frame not available
Manufacture of wearing apparel & textiles	125	Quota sampling	Sampling frame not available
Manufacture of paper, paper products & printing	30	Quota sampling	Sampling frame not available
Manufacture of tobacco products	15	Simple random sampling	Sampling frame available
Manufacture of leather & related products	15	Census	Small sampling frame (below 30)
TOTAL SAMPLE SIZE	538		

Source: Adapted from UN ISIC classifications

Higher education's role in capacitating retail businesses' well-being, resilience and efficiency post-COVID-19

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ABSTRACT

The COVID-19 pandemic is challenging business confidence and sustainability globally. This paper explores the critical role of higher education institutions (HEIs) in supporting retail businesses to capitalise on the realities of the pandemic. Following a corpus-review approach, 147 articles on higher education, COVID-19, and retail that were published from January to May 2020 were analysed. A constructivist grounded theory approach driven by a data coding process and qualitative analysis was adopted to identify underlying concepts for constructing appropriate responses. First-level coding identified substantive codes that were converted into broader abstract concepts, while a word-tree analysis identified the core theme. A series of codes were classified into reduced final concepts and dimensions using NVivo 12. Finally, a binary similarity index (Jaccard's coefficients) was used to calculate the similarities between any two sets of substantive concepts. The results revealed three driving forces determining post-COVID-19 retail business survival and sustainability: quality, omni-channel retailing, and accountable management. The demand for flexible and blended forms of life-long learning will require employee up-skilling and re-skilling, and has increased the demand for short-term online courses. The future of retail businesses will depend more on science and technology that focus on the green economy, health and safety, and daily business operations. The future of retail relies on big data, artificial intelligence and automotive learning devices to act ex ante on expected changes in the retail ecosystem. More research is required on how to cultivate HEI partnerships to collectively develop a noösphere capacity to protect the retail sector from micro and global challenges.

Keywords: accountable management, constructivist grounded theory, COVID-19, higher education, omni-channel retailing, quality

INTRODUCTION

Recently, Grewal, Roggeveen & Nordfält (2017) found that five factors would shape the retail sector's future, namely decision-making technologies and tools, visual display and merchandise offer decisions, consumption and engagement, collection and use of big data, and analytics and profitability. In addition, emerging trends were identified that would have a further compounding effect, for example the internet of things, virtual reality, artificial intelligence, robotics, drones and driverless vehicles. During the COVID-19 pandemic, these findings and trends developed rapidly and gained momentum. The outbreak highlighted the importance of health as an ecosystem factor that must be included in retail operations. The pandemic is increasingly fostering an awareness that retail businesses cannot continue to adopt a hands-on approach to cope with the consequences of COVID-19. Rather sustainability and success rely on a dramatic shift in operations and the full participation of stakeholders, including higher education institutions (HEIs), to support innovative ways of doing business and accelerating the demand for innovation.

Considering the above, HEIs could play a crucial role in this new reality while remaining true to their core functions of nation-building, modernisation, community development, and a country's self-development (Steynberg, Grundling, Liu & Li, 2020). This agency role is particularly important in serving its principal constituency, namely business, and especially the retail sector, in times of crisis. Consequently, this paper focuses on the current global crisis, COVID-19, which has resulted in a new kind of living and conducting business, and will challenge HEIs to reflect on how to provide relevant value-added services.

COVID-19, the disease and global business disrupter, is caused by a highly infectious new coronavirus (SARS-CoV-2). This new coronavirus caused a global pandemic, resulting in radical public and health policies and extreme country lockdown measures worldwide (La, Pham, Ho, Nguyen, P Nguyen, Vuong, Tran, Khuc, Ho & Vuong, 2020; Naicker, Yang, Hwang & Chen., 2020; Sawahel, 2020; Sutkowski, 2020). Even before the epidemic was announced on 10 January 2020, COVID-19 was already a major crisis in China, a crisis in the making abroad, and a pandemic that would threaten people's daily economic, business, health, and social lives globally (Burke, Burton, Fishpaw, Greszler, Michel, Michel, Sheppard & Winfree., 2020; Khan & Razvi, 2020). COVID-19 is still not under control at the writing of this paper, and it continues to spread rapidly without a cure in sight (Abrami, 2020; Gong, Xiong, Xiao, Lin, Liu, Wang & Li, 2020).

At macro-level, COVID-19 poses a huge threat globally due to the interconnectedness between the global economic and political systems, and also because little is known at present about this under-researched virus, its behaviour and effects (Maital & Barzani, 2020; Platje, Harvey & Bacchus, 2020). COVID-19 has already demonstrated its global impacts far beyond mortality and morbidity by signalling power shifts in the direction of Asian countries, shifts to automated production infrastructure, increased confidence in technology, reduced working hours, more emphasis on health and health care, and a decrease in business travelling (Al Omian, 2020; McKibbin & Fernando, 2020). It has, in addition, disrupted global supply chains and restricted transport within and between countries, resulting in a sudden worldwide resource scarcity (Bacq, Geoghegan, Josefy, Stevenson & Williams, 2020; McKibbin & Fernando, 2020). On the positive side, COVID-19 has created global opportunities for countries and nations to clean and green their economies, making them more sustainable, healthy and resilient (Guterres, 2020).

In general, the COVID-19 outbreak led to expectations of a global economic meltdown. The impact of this meltdown differs from country to country and it has the greatest impact on countries with low per capita incomes. These countries rely on a small number of economic giants, and production is transferred to countries that benefit from economies of scale, while long supply chains increase weaker countries' fragility.

At micro economic level, many businesses with a limited product or service mix leave the extremely vulnerable behind in times of a crisis (Altbach & De Wit, 2020; De Alwis, 2020). The closure of production facilities as well as shops, restaurants, and hotels worldwide has not only increased unemployment, but has also adversely impacted economic growth, financial markets, national income, stock markets and government budgets. This, in turn, exerted pressure on pension funds and public goods and services (Platje, Harvey & Bacchus, 2020). The overall slowdown in the economy will lead to a contraction in the supply of goods and services in the short term, leading to a rise in the prices of goods and services. However, central banks are expected to have limited effect on stimulating economic demand because of already low interest rates. This could lead to significant contractions in the demand for goods and services, which could place downward pressure on prices and increase unemployment (Maital & Barzani, 2020). All in all, the net effect still necessitates further investigation, because some affected consumers may reduce spending or decide permanently against a particular spending, while other lost demand may be temporary, and only related to the pandemic. As the pandemic recedes, consumers may tend to catch up with their spending, such as spending on vacations (Maital & Barzani, 2020).

On the other hand, the COVID-19 pandemic created new opportunities for building a productive workforce that exploits new and innovative approaches to hiring, training and retaining employees and assisting employees to succeed (Harker, 2020). Another positive effect is that most central banks have lowered their interest rates, enabling consumers to spend their money elsewhere, including on monthly bond repayments (Harker, 2020). Most importantly, an opportunity exists to drive economic recovery by focusing on "clean and green" jobs and business development in policy-making, financial support to businesses, and infrastructure provision (Guterres, 2020).

At the business level, COVID-19 has once again forced businesses to reflect more on a future characterised by agility, digitalisation, automation, and investment in renewables (Heading, 2020). There also is a need for more clarity on why the most job losses were experienced by Millennials (individuals currently between the ages of 25 and 39), who had also been adversely impacted in their early careers during the recession of 2008/9, followed by Generation X (individuals currently aged 40 to 54), and why those who are unable to work from home lost their jobs (IHE staff, 2020). McGuigan & Ghio (2020) warn businesses against over-reliance on a single global market, economic rationality, standardised business governance and accountability approaches. For this reason, globalised business monoculture became a risk vulnerability in favour of diversity and multi-cultural approaches to the production of ideas, system diversity and even economic diversity. The relentless presence of "wicked problems" confirms this point. Wicked problems (or baskets of problems), require simultaneous holistic solutions, as individual solutions are sometimes in conflict with one another. This forces business decision-makers to make trade-offs based on solution rakings, ethical notions, social choice, utility, and personal choice considerations. This may require the use of artificial intelligence capabilities (Mathur, 2020). With the opening up of Asian businesses, businesses from other countries can use the opportunity to observe what can be learned from the return to a new "normality" (Tonby & Woetzel, 2020).

The retail sector experiences their own wicked problems. More specifically, the sector directly manages transactions between sellers and consumers, and was also severely affected by COVID-19, as many retailers temporarily closed their doors in response to either regulatory mandates or reduced consumer demand and/or supply chain disruption. Only a few remained open under strict constraints to render essential services to the market (Chapuis, 2020; Stephany, Stoehr, Darius, Neuhäuser, Teutloff & Braesemann, 2020). The retail sector supply chain was also severely disrupted, as many products traded are not sourced locally (Fernandes, 2020). Furthermore, the COVID-19 outbreak in China also resulted in a considerable number of customers switching between retailers because of government-ordered business closures. It is still unknown whether this switching between retailers represents a temporary phenomenon or will continue, and if this is a general phenomenon. Nevertheless, the disruptions in the retail sector resulted in large-scale restructuring of the industry, bringing new retail formats into the retail system and more opportunities and choices for consumers (Li, Hallsworth & Coca-Stefaniak, 2020).

To fulfil its agency role to support the retail sector, HEIs are responsible for generating and assimilating knowledge, working side by side with communities and businesses to craft effective responses in times of crisis, and engaging in shared endeavours to create substantive benefits for society and industry as a whole (Abrami, 2020; Yong, 2020). Although this stance is widely accepted in academia and even in business circles, the current COVID-19 pandemic raises questions regarding the practicality and value-added role that HEIs should play in times of crisis and paradigm changes. Scientific evidence and information about how businesses, especially retail businesses, should protect themselves in terms of well-being, resilience and efficiency, is alarmingly scarce. In this context, the aim of this paper is to present solutions in which HEIs could rapidly capacitate retail businesses to achieve business survival and sustainability post-COVID-19. The aim gives recognition to the need of multi-stakeholder participation, ecosystem considerations and innovation demands of retail businesses to survive and thrive during and after crisis events such as COVID-19.

RESEARCH METHODOLOGY

This paper was developed while COVID-19 was still in the progressive phase and scientific knowledge of the pandemic was still in its infancy. The content is confined within a global health pandemic context that started late in 2019 and caused worldwide crises and havoc, with its impact and consequences still escalating. Since the COVID-19 pandemic represents an evolving crisis, a constructivist grounded theory approach was followed.

Textual analysis from a corpus of publications was used (Quinlan, 2011) and focused on retail in its broadest global sense rather than on a particular type of retail or geographical context. This approach enabled the researchers to identify and create theoretical concepts about, in the first place, the needs of the retail sector in COVID-19's living social context, and, secondly, about appropriate responses expected from HEIs to guide the retail sector to survival and sustainability. By providing content to the identified concepts through an intensive coding of 147 articles covering the period from the beginning of January 2020 to the end of May 2020 the researchers were able to formulate recommendations to HEIs and retail institutions on capacitating retail businesses to ensure their well-being in terms of their survival and sustainability in an “in-construction” reality. This was done in full realisation of the fact that the impact of COVID-19 is distributed unevenly across countries, and that a detailed response plan requires substantial heterogeneous responses. However, the conclusions drawn provide useful information for both HEIs and the retail industry to consider.

A constructivist grounded theory approach was followed by not assuming the presence of a pre-existing reality according to which the retail industry should operate during and after the COVID-19 pandemic. Rather, the decision to adopt a constructivist grounded theory approach presupposes that reality is constructed by the meanings that social actors, in this case, retail and HEI actors and also meaning making of the researchers, ascribe to their experiences and observed phenomena (Mills, Bonner & Francis, 2006; Saunders, Lewis & Thornhill, 2016).

The researchers used a data mining approach for data collection, data cleaning and processing, and analysis to obtain concise and practical insights from the available text data (Aggarwal, 2015). This was done to firstly contextualise the paper within a pandemic, global, economic, business, retail and HEI funnelling perspective. The ultimate aim is to explore how HEIs can capacitate retail business well-being, resilience and efficiency in times of crisis. A broad heterogeneous corpus of articles of both scientific and practical value were identified by applying a Boolean search query approach using Google Scholar and Google search engines. The following keywords were used as singular search items and in various combinations with each other to provide an appropriate timeframe and target framework: Higher education, retail, business, government, COVID-19, 2020. Finally, the abstract of all publication files were scrutinized for appropriateness before selection for analysis.

A corpus theoretical sample of 147 published files was selected from the entire corpus population of scientific and grey publication files published over the period January to May 2020 in reputable international HE newspapers and magazines for analysis. The use of grey publication files was done with the purpose of identifying novice ideas on how HE could respond to the post-COVID-19 retail environment. With the hope of encouraging more informed dialogue from more novel discoveries and contributing to academic and practical business discourse, a non-traditional data search approach was implemented. All qualitative text data was converted to a Word Version 10 or PDF format for coding and analysis. No dependencies were specified between any of the data records or data items, so the captured text data were of a non-dependency-orientated nature. This implies that the data records did not have any specified dependencies between either the data items or the attributes. During the coding process, relationships between codes were synthesized based upon the disciplinary knowledge of the researchers in the fields of economics, business economics, entrepreneurship and psychology, as well as the research team’s cumulative higher education experiences of more than 100 years. The compiled transformed data and relationships were captured in the NVivo Version 12 software program.

In the first round, text data were coded into a substantive code classification, article by article, in sequence. The researchers identified types of articles for further data collection during the coding process and the first-level analysis. Each code represents a summative concept capturing the primary content of data under the name of that code (Saldanha, 2015). In text coding, there is always the possibility of coding text into multiple classifications, with the result that some substantive codes are not mutually exclusive (Bramer, 2007). In order to improve code classification accuracy, the researchers used two qualified social scientists as coders, who had to reach consensus before the text was classified into a particular substantive code. In cases where there was still double coding, thus overlapping, the researchers reflected and engaged in an encoding process to merge and rename the resultant code with a more appropriate name. The coding process entails more than just labelling codes. It also implies linking concepts by determining the relationship between concepts. For example, in this research, information construction and technology in higher education was associatively linked to data and technology in the retail sector.

There are also words that are repeated in different codes. As a result, the researchers engaged in a search process for possible patterns in the data. According to Saldanha (2015), patterns in data may occur due to regularity or similarity. The researchers conducted cluster analysis using Jaccard’s coefficients to identify patterns in similarity. The purpose of the cluster analysis was to determine the core abstract concepts that HEIs could use to capacitate retail businesses’ well-being in times of crisis. Guided by the values of the Jaccard’s coefficients, the researchers determined the scope of the content to be addressed under each identified core concept. The researchers also relied on the weight of significant words in the text and the researchers' code definitions. The frequency of words appearing in a word tree, for all substantive codes were determined to identify the core theme (concept) on how HEIs could capacitate retail businesses in times of crisis, while word frequencies within a code were used to describe the core meaning of the code. The five most frequently used words were used to formulate the core theme.

DISCUSSION OF FINDINGS

The findings on the impact of COVID-19 on global retail and how HEIs could capacitate the retail sector suggest that the pandemic needs to be understood both from the perspective of a strategic and operational ecosystem and from a content priority perspective. The results cast new light on the consequences of underestimating prospects in an eco-environment, while at the same time demonstrating how ecosystem factors can quickly change the expected behaviour of all participating actors during and after the event.

Strategic and operational eco-system perspective

The cause of the COVID-19 pandemic can be seen as an ecosystem factor affecting the well-being and sustainability of retail businesses worldwide. While the researchers acknowledge that an economic lockdown on this scale was unforeseen, it can be speculated that retail businesses were not adequately prepared for integrating crisis-related ecosystem factors such as the COVID-19 pandemic into their strategic and day-to-day operational decisions. They were thus caught off guard and unable to respond to drastic and rapid changes and challenges in the business environment. The effects are apparent in mass layoffs, staff reductions, temporary closures, supply chain disruptions, reduced consumption of non-essential products and services, production interruptions, financial vulnerability of retail businesses, and concerns about employee and consumer health. These effects are expected to be long-lasting.

The above effects should be minimised as far as possible, and, more importantly, should be harnessed to improve the resilience, efficacy and sustainability of retail businesses post-COVID-19. To this end, retailers would need to improve their predictive decision-making ability and increase their market awareness. This interpretation is in line with the views of Özden & Gürlek (2020) and Zhang & Watson (2020), namely that the meaningful use of unstructured, diverse, related and unrelated data, trends and other kinds of observed data requires better and consistent sense-making and insight. Sense-making and insight capabilities should be improved and extended, and resource-searching and sense-making recommendations should be provided to retail businesses operating in a crisis environment (outside-in effects), or experiencing a crisis caused by endogenous factors. This calls for greater reliance on artificial intelligence capabilities created through machine learning. Machine learning techniques can offer structure to data, uncover complex relationships, and improve the predictive performance of data, especially in times of crisis. In essence, this means that retail businesses require digital transformation and implementation. When the first crisis signals are detected via virtual and real change agents, such transformation to greater reliance on artificial intelligence could provide immediate personalised advice and assistance to retail businesses. The data based on these signals could be related to anticipated demand, automated store operations, automated product assortments and automated supplier renegotiations, amongst others. This challenge has brought about profound responsibilities for HEIs to provide the retail sector with more talented people who are technically well-prepared to become effective big data insight consumers and make the right decisions. According to Dekimpe (2020), this brings into question a topic that still requires further research, namely whether computational skills should be emphasised more in retail curricula, so that students will be just as comfortable with algorithms and data analysis than with retail domain-specific insights.

The domain-specific content concepts identified in this research are presented in hierarchical order in Table 1, and addressed briefly in the following paragraphs. These concepts are intended to provide a conceptual understanding of emerging retail priorities worldwide, and could be used for theory building in subsequent studies. Therefore, conceptual understanding remains relevant in the context of the recognition that data-driven capabilities still need a sound conceptual understanding of retail. This can be achieved if future academic research is guided by the short- and long-term impact of COVID-19 on both consumer behaviour (Roggeveen & Sethuraman, 2020) and retail networks.

The central key concept derived from the research can be labelled “Comprehensive Retail Network Compliance”. According to the findings of this research, the key message of “Comprehensive Retail Network Compliance is that a retail business needs to be accountable for how its decisions and actions comply with total product and service quality requirements that may influence the well-being of both the business and the members of its dispersed retail network. This core concept emerged as a necessity for the retail sector during the COVID-19 pandemic, but also to improve the resilience (the ability to recover after adversity) and efficiency (to do the right things right) of the retail sector post-pandemic. According to Chen (2019), networks have enormous market power that can easily be exploited, particularly in the field of digitalisation and machine learning. The research revealed three important domains that require special attention to ensure the well-being of the retail sector, network members and consumers, namely quality, omni-channel retailing, and accountable management. A key ingredient of retail business competitiveness in the post COVID-19 period will be to ensure that the interests of retailers, network members and consumers are protected and supported. This must be achieved within and across an open and interconnected system approach, and in collaboration with various stakeholders, including HEIs, who need to provide the right talent and technical expertise to the retail sector.

The problems faced by the retail sector and industry may force HEIs to refocus from a supply-side service delivery approach to a more demand-side approach dominated by market demand. This shift would not only affect curriculum content, but also influence instructional modes and programme composition. The challenges faced by HEIs are even more arduous because the pace of change is so fast that the traditional education structure cannot be maintained, as students will need to learn what they need when they need it. This type of learning depends heavily on the development of artificial intelligence algorithm learning capabilities that provide students with personalised, engaged, and reflective learning opportunities (Krishnamurthy, 2020).

This key conceptualisation stands on the three critical pillars of quality, omni-channel retail and accountable management. Although these three concepts are not new in retail literature, COVID-19 has undoubtedly accelerated the need to adopt and integrate these transformative models into any retail business model and day-to-day retail operations. In the first place, these transformative models rely on the availability of and accessibility to information from digital media, social media, big data and other emerging technologies, artificial intelligence, and virtual reality (Cai & Lo, 2020). Thus a need exists to avail information across consumers to provide data about purchase behaviour and consumer trading, across products to offer information about products and product properties, across time to give information on stocks, stock-outs and purchase trends across time periods, across geo-spatial locations to provide information to hyper-target customers and information about network channels relating to online and offline retailing. Secondly, accountable management practices must be implemented that make provision for consumer protection, responsible data management and the establishment of resilient and efficient supply chains. Lastly, the focus of all retail activities must be vested in quality.

The discussion of the major findings is presented on the basis of the content presented in Table 1, which shows the hierarchical needs of retail post-COVID-19.

Quality

Although the Total Quality Management (TQM) concept based on the continuous improvement of all aspects of the retail sector remains important in the face of increasing competition and consumer demands, three new concepts emerged from the findings. Firstly, COVID-19 has prompted a greater awareness of product quality than ever before. Secondly, there is a growing demand for promotional savings, and, thirdly, a higher demand for goods with increased longevity can be seen. Typical product attributes include non-iron, stain- and scuff-resistant materials, as well as environmentally friendly and “at its best” products that support healthier and “good for you” lifestyles. The economic effect of the pandemic on household income and disposable income has given rise to consumers demanding more product-saving promotions. Therefore, in considering the health and cost savings of consumers, collective promotional sensitivity is required during and post-COVID-19, as a result of stronger “social herding behaviour”, which strongly correlates with safety and confidence in product quality (Khan, 2020).

TABLE 1
HIERARCHICAL NEEDS CLUSTERS FOR THE RETAIL SECTOR

Core concept	First order concepts	Second order concepts	Third order concepts	Content
Comprehensive Retail Network Compliance	1. Quality			• Money saving promotions • Product longevity • Shelf-life
	2. Omni-channel retailing	Sales approach	Interaction intentions	• Less physical interaction • Expand consumer base (Promotion)
			Channel characteristics	• Early movers benefit • Online shopping • Smaller outlets benefit • Focus on technological savvy • Convenience and speed • Healthy, green and quality products • Comparisons • Expand reach • Growing options • Product shortages
			Transaction features	• Check-out free shopping • Process shoppers quickly • High volumes • Rapid turnover
		Customer practices		• Employee and customer distancing • Changing customer routines
	3. Accountable Management	Supply chains		• Cost • Lead times • Material and stock management • Resilience vs efficiency • Distribution channels revised • Movement to retail buyers • Expand local services
		Demand management	Customer Safety	• Social distancing • Hygiene measures • Antibacterial properties • Supply chain safety
			Data	• Customer buying patterns • Artificial intelligence data • Machine learning • Customer-relationship • Sales data
			Technology	• Mobile transfers (Mobile phones) • QR and Bar Coding • Virtual fitting with needs

Omni-channel retailing

The research findings correspond to the essential nature of omni-channel retailing defined by Verhoef, Kannan & Inman (2015:176) as "the synergetic management of the numerous available channels (i.e. online, off-line, blended, pick-up options and so forth) and customer touchpoints, in such a way that the customer experiences across channels and the performance over channels are optimized". This type of retailing is already a popular and widely accepted retail approach (Cai & Lo, 2020). In alignment with and in addition to the views of Haines (2020), online shopping will stabilise at far higher rates pre-COVID-19, new consumer purchasing trends will emerge, home delivery will increase, the demand for automation will be greater, and the greater emphasis on local micro-fulfilment strategies will provide more concrete clarity for the sales approach and customer practices of the retail sector.

Sales approach

Changes to the sales approach will be visible in three domains, namely interaction with customers, channel characteristics and transaction features.

Interaction with customers – The findings revealed that omni-retailing will continue to gain strength as consumers have less need to experience physical in-store interaction because of COVID-19. Due to a decline in non-essential retail activities during COVID-19, retailers are considering new ways of attracting and expanding their customer base, even globally. The changing needs of customers and retailers' need to expand the customer base, provides a reasonable argument for the use of omni-retailing. Therefore, the new sales approach supports the view of Haines (2020), who urges retailers to procure more Goods-to-Person (GTP) technologies in order to ship a greater variety of goods, thus expanding the customer base in a shorter time. If retailers were to take advantage of these technologies, it could become a powerful promotional strategy.

Channel characteristics – The results revealed that early or first retail movers, especially smaller retail outlets, not only benefit from providing online shopping opportunities, but simultaneously add new benefits, such as convenience and speed, to what is offered. This requires developing smart supply chains that build on smart technologies. As technological knowledge grows, the reach of all participants in the channel is expected to expand, particularly those committed to providing healthy, green and quality products. It is envisaged that, in the distribution of goods post-COVID-19, transport vehicles will be equipped with connectivity, fleet-greening infrastructure, and even autonomous driving capabilities to comply with the vehicle-to-everything principle, such as vehicle-to-safety, vehicle-to-energy, and vehicle-to-customer identification, vehicle-to-retailer indication, and vehicle-to-geographical space adaption principles. It is evident that maximising social and environmental safety and benefits will be given top priority post-COVID-19. These new additions to the retail channel system will provide consumers, and especially the local community, with enhanced and extensive purchasing opportunities.

Transaction features – The findings revealed that transactions in the retail sector are characterised by demands for check-out free shipping and quicker processing of customers, and focus more on high shopping volumes and assortments, resulting in high turnover. Where consumers visit retail stores physically, significant investments in safety and epidemiological protective equipment would be required to secure a human-saving eco-system in the store.

Customer practices

Clearly, consumer consumption patterns have changed as consumers became more aware of the usefulness and ease of use of products, trust in retailers, and retailers' awareness of compliance with hygiene and safety measures such as physical distancing. In addition, Pantano, Pizzi, Scarpi & Dennis (2020) assume that as consumers reassess their established habits, retailer switching may occur post-COVID-19. Consumer habits could change, taking into account spatial proximity, availability during emergencies, attachment to retailers during a pandemic, and the discovery of services that offer benefits they did not use before the pandemic. The findings also indicate that consumers who switch to online shopping will largely remain online or shift to small local retailers or supermarkets. Retailers also need to accommodate the fact that consumers' discretionary income will be lower for some time, and that they could therefore postpone certain types of purchases and become more sensitive to value-for-money purchases. The post-COVID-19 era will once again bring to the forefront a need for studies to examine own and cross-price elasticities to identify new consumer substitution patterns and reallocations. Such studies may be important, as past estimates do not provide a true reflection of post-COVID-19 realities. Lastly, consumers who are classified as high-risk groups, like the elderly, are more likely to change their consumer behaviour to comply with regulations and health and safety standards.

Accountable management

Accountable management refers to public accountability to all stakeholders as it relates to the operations within the business itself, the supply chain and the management of demand. In the operation of retail businesses, more emphasis will be on measures to protect the health of customers and employees, educating employees, and the need to disseminate more health-related information to all stakeholders. This ensures that businesses comply with the expected code of conduct. In all supply chain activities, such as cost, material, inventory, distribution and lead time management, it is envisaged that the new balancing norm will be a trade-off between the resilience indicators and efficiency criteria. On the other hand, demand management will be driven by greater reliance on data and information technology, with more emphasis on consumer safety.

Content priority perspective: the role of higher education

A core function of HEIs is to assist in ensuring the readiness of retail businesses before, during and after a pandemic or crisis. This view is supported by Brandenburg, de Wit, Jones & Leask (2019) that HE has an obligation to society through its research, teaching and learning engagements and the involvement of all actors in the business-HE system to produce knowledge that can be applied in various contexts. The findings revealed that the retail labour market faces an increasing demand for flexible and blended forms of lifelong learning that proceed beyond initial education, focusing more on the upskilling and reskilling of employees, especially in preparation for the digital economy, and providing more short-term online courses. This requires a shift from the supply side focus of HEIs to being more demand driven. Therefore, HEIs need to be more involved in active and diverse labour market programmes that respond more appropriately to global developments and crises (Grigoli, Koczan & Topalova, 2020). This necessitates rethinking the conventional role of HE to adapt to new conditions and social reforms post-COVID-19. Amongst others HE will have to build capacities to enable scholars to collaborate on life-world problems in the retail environment, enhance its competitive advantage in information technology, cater for students to freely select education options as smart consumers and respond to the discourse of the fourth industrial revolution (Peters, Rizvi, McCulloch, Gibbs, Gorur, Hong, Hwang, Zipin, Brennan, Robertson, Quay, Malbon, Taglietti, Barnett, Chengbing, McLaren, Apple, Papastephanou, Burbules, Jackson, Jalote, Kalantzis, Cope, Fataar, Conroy, Misiaszek, Biesta, Jandrić, Choo, Apple, Stone, Tierney, Tesar, Besley, & Misiaszek, 2020.). As such, HE cannot be restricted to a nation centric retail approach.

The results emphasise the greater dependency post-Covid-19 of retail on science and technology. HEIs will play an increasing role in supporting and preparing the retail sector to participate and contribute to a clean and green economy, safeguarding consumer and employee health, and empowering all stakeholders in the retail chain with the dissemination of relevant health information as part of their daily operations. The level and types of technology required, such as big data and artificial intelligence, as well as rapid changes in the retail sector, will compel HEIs to participate actively in this sector, not only by providing talented participants, but also by ensuring that the correct capabilities are provided when needed. In order to fulfil this responsibility, HEIs will have to assess how to align their traditional supply-driven curriculum offerings with the new demand-driven challenges. In the authors' view, a shift towards the development and use of automotive learning devices that enable self-driven, participatory, reflective, and lifelong learning is required. In addition, HEIs will develop artificial intelligence technologies through machine learning research, which could provide retailers with ex ante guidance on expected changes and decisions in the retail ecosystem, retail channels, consumer behaviour and competition, and offering the proper product and service mix. Hence, HEIs need to engage more with retailers to seek new and innovative business models for sustainable development, in the event of major operational disruptions caused by crisis.

DIRECTIONS FOR FUTURE RESEARCH

Since the findings of this research cover a short period in an unprecedented crisis, there is a need to assess whether permanent or temporary changes occurred in consumer demand and habits. More applied research is required to determine how HEIs could position themselves to provide individual and immediate assistance to retailers in the framework of a multi-party stakeholder interest with multiple competitive influences. Since most HEIs are unable to address all retailers' needs in a comprehensive manner, more research is required. Such research should explore how to foster effective HEI partnerships to collectively build a noösphere capacity that shapes and changes global challenges, and protects lives and livelihoods as well as national economies, including the micro challenges and protection needs experienced in the global retail sector. Moreover, research is required to assess whether HEIs have gained or lost the respect of science and technology providers in times of crisis, and what measures need to be taken to maintain or regain institutional respect. The latter is important because, despite advancements in science and technology, humanity remains vulnerable.

CONCLUSION

The global retail sector is experiencing radical transformation as a result of the technological and digital revolution, and is developing rapidly due to the COVID-19 pandemic, which caused a simultaneous demand and supply challenge. Some of the expected retail-sector changes are structural changes that will continue for a long time. This requires retailers to use more sophisticated and accurate analytical procedures. In this, HEIs can contribute by providing the retail industry with talented people who have the insight and capability to interpret big data, develop appropriate automotive technology, respond appropriately to ecosystem factors, understand the geopolitical circumstances of the local environment, and provide guidelines to model changes in consumer behaviour.

The core focus of the retail sector should be to ensure full compliance with comprehensive retail network requirements. The growing online retail trend is expected to continue and therefore there is a need for further research to determine whether online retailing will become more localised in terms of territorial space and distance as a result of better knowledge of local health-related circumstances and support of retailers in close proximity.

The challenges discussed in this paper do not intend to introduce a new discourse for HEIs. On the contrary, it serves as a reminder to HEIs to remain true to their core functions of nation-building, modernisation, community development, and the self-development of a country. To remain relevant and provide value-added services in times of modernisation and crisis call for a review of what needs to be done and how to engage in shared participation with stakeholders.

ACKNOWLEDGMENTS

The authors wish to extend their sincere gratitude to Hebei University of Technology and Tshwane University of Technology for their support and financial contribution. This research was also partly supported by the Higher Education Reform Fund of Hebei Province, People's Republic of China (No. 2017GJJG022), the Postgraduate Demonstration Course Construction Project of Hebei Province (No. KCJSX2018014), the South African Department of Higher Education and Training and the Faculty of Management Sciences, Tshwane University of Technology.

DECLARATION

The authors declare that there is no potential conflict of interest with respect to the research, authorship, and publication of this manuscript. The manuscript was furthermore not submitted for publication previously and was language edited before submission.

REFERENCES

Abrami, R. 2020. How will Covid-19 change business education? Available at: https://www.aspeninstitute.org/blog-posts/how-will-covid-19-change-business-education/ (Accessed: 1 May 2020).

Aggarwal, C.C. 2015. Data mining: the textbook. New York: Springer.

Al Omian, K. 2020. Are we witnessing the awakening of a new world order? Forbes Middle East, April, 1-9.

Altbach, P.G. & De Wit, H. 2020. Post pandemic outlook for HE is bleakest for the poorest. World University News, 4 April. Available at: https://www.universityworldnews.com/page.php?page=Trans_Lead (Accessed: 7 April 2020).

Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R. & Williams, T.A. 2020. The Covid-19 "Virtual Idea Blitz": marshalling social entrepreneurship to rapidly respond to urgent grand challenges. Available at: www.virtialideablitz.com (Accessed: 2 May 2020).

Bramer, M. 2007. Principles of data mining. Third Edition. London: Springer-Verlage.

Brandenburg, U., de Wit, H., Jones, E. & Leask, B. 2019. Internationalisation in higher education for society. World University News, 20 April. Available at: https://www.researchgate.net/profile/Elspeth_Jones/publication/ 340535564_ Internationalisation_in_Higher_Education_for_Society/links/5e8f2a97a6fdcca789023e69/Internationalisation-in-Higher-Education-for-Society.pdf (Accessed: 30 September 2020).

Burke, L., Burton, D.R., Fishpaw, M., Greszler, R., Michel, M., Michel, N.J., Sheppard, P. & Winfree, P. 2020. The senate's coronavirus bill: bailouts, missed opportunities, and positive reforms. Backgrounder, 3479: 1-13. Available at: www. heritage.org (Accessed: 27 March 2020).

Cai, Y. & Lo, C.K.Y. 2020. Omni-channel management in the new retailing era: a systematic review and future research agenda. International Journal of Production Economics, 229, 107729. Available at: https:/doi.org/10.1016/j.ijpe.2020.107729 (Accessed: 3 July 2020).

Chapuis, P. 2020. Covid-19 will bring lasting innovation to retail. Available at: https://www.retailcustomerexperience.com/ blogs/covid-19-will-bring-lasting-innovation-to-retail/ (Accessed: 6 May 2020).

Chen, Y. 2019. Improving market performance in the digital economy. China Economic Review. Available at: https://doi. org/10.1016/j.chieco.2020.101482 (Accessed: 29 March 2020).

De Alwis, A. 2020. Coronomics-Plan your eggs and the basket. Wisdom Window, 10(2): 15.

Dekimpe, M.G. 2020. Retailing and retailing research in the age of big data analytics. International Journal of Research in Marketing, 37: 3-14. Available at: https://doi.org/10.1016/j.ijresmar.2019.09.001 (Accessed: 2 April 2020).

Fernandes, N. 2020. Economic effects of coronavirus outbreak (Covid-19) on the world economy. 22 March. Available at: https://ssrn.com/abstract=3557504 (Accessed: 10 May 2020).

Gong, F., Xiong, Y., Xiao, J., Lin, L., Liu, X., Wang, D. & Li, X. 2020. China's local governments are combatting Covid-19 with unprecedented responses – from a Wenzhou governance perspective. Frontiers in Medicine. Available at: https:// www.doi.org/10.1007/s11684-020-0755-z (Accessed: 21 March 2020).

Grewal, D., Roggeveen, J. & Nordfält, J. 2017. The future of retailing. Journal of Retailing, 93(1): 1-6. Available at: http:// dx.doi.org/10.1016/j.jretai.2016.12.008 (Accessed: 1 April 2020).

Grigoli, F., Koczan, Z. & Topalova, P. 2020. Automation and labor force participation in advanced economies: macro and micro evidence. European Economic Review, 126(C). Available at: https:/doi.org/10.106/j.euroecorev.2020.103443 (Accessed: 3 June 2020).

Guterres, A. 2020. UN urges countries to "build back better". Available at: https://www.un.org/en/un-coronavirus-communications-team/un-urges-countries-%E2%80%98build-back-better%E280%99 (Accessed: 24 April 2020).

Haines, A. 2020. How COVID-19 will permanently change your omni-channel supply chain. Available at: https://www. bastiansolutions.com/blog/how-covid-19-will-permanently-change-your-omni-channel-supply-chain/ (Accessed: 27 May 2020).

Harker, P.T. 2020. The opportunities of a tight labor Market. University of Delaware, Newark, DE: 2020 Lyons CEEE Economic Forecast.

Heading, S. 2020. The answer "what now", companies are asking "what next". Available at: https://home.kpmg/xx/en/ blogs/home/posts/2020/04/covid-19-clues-what-to-watch.html (Accessed: 30 April 2020).

IHE staff. 2020. Coronavirus live updates archive from April 12-18. Inside Higher Education. Available at: https://www. insidehighered.com/news/2020/04/20/ coronavirus-live-updates-archive-april-12-18 (Accessed: 21 April 2020).

Khan, A.U. & Razvi, S. 2020. How India must tackle China's killer bug. Policy Watch, 9(1): 19-23.

Khan, N.A. 2020. Outbreak of Covid-19: its impact on brand health and marketing communications. Available at: https:// economics.iba.edu.pk/articles/nida-v3.pdf (Accessed: 2 June 2020).

Krishnamurthy, S. 2020. The future of business education: a commentary in the shadow of the Covid-19 pandemic. Journal of Business Research, 117: 1-5. Available at: https://doi.org/10.1016/j.jbusres.2020.05.034 (Accessed: 26 April 2020).

La, V.P., Pham, T.H., Ho, M.T., Nguyen, M.H., P Nguyen, K.L., Vuong, T.T., Tran, T., Khuc, Q., Ho, M.T. & Vuong, Q.H. 2020. Policy response, social media and science journalism for the sustainability of the public health system amid the COVID-19 outbreak: the Vietnam lessons. Sustainability, 12(7): 2931.

Li, J., Hallsworth, A.G. & Coca-Stefaniak, J.A. 2020. The changing grocery shopping behaviour of Chinese consumers at the outset of the Covid-19 outbreak. Tijdschrift voor Economische en Sociale Geografie. Available at: https://doi.org/10.1111/tesg.1420 (Accessed: 20 May 2020).

Maital, S. & Barzani, E. 2020. The global economic impact of Covid-19: a summary of research. Technion City, Haifa: Samuel Neaman Institute for National Policy Research.

Mathur, A.N. 2020. Strategies for solving wicked problems of true uncertainty: Tackling pandemics like Covid-19. Ahmedabad, India: Indian Institute of Management.

McGuigan, N. & Ghio, A. 2020. How will Covid-19 change business education? Aspen Institute, 15 April. Available at: https://www.aspeninstitute.org/blog-posts/how-will-covid-19-change-business-education/ (Accessed: 1 May 2020).

McKibbin, W. & Fernando, R. 2020. The global macroeconomic impacts of COVID-19: seven scenarios. CAMA Working Papers 2020-19. The Australian National University: Centre for Applied Macroeconomic Analysis, Crawford School of Public Policy.

Mills, J., Bonner, A. & Francis, K. 2006. The development of constructivist grounded theory. International Journal of Qualitative Methods, 25-35. Available at: https://journals.sagepub.com/doi/10.1177/160940690600500103#articleCitationDownloadContainer (Accessed: 30 September 2020).

Naicker, S., Yang, C., Hwang, S. & Chen, J. 2020. The novel coronavirus 2019 epidemic and kidneys. Kidney International, 1-5. Available at: www.kidneyinternational.org (Accessed: 20 March 2020).

Özden, G.A. & Gürlek, R. 2020. Automatic interpretable retail forecasting with promotional scenarios. International Journal of Forecasting. Available at: https:/doi.org/10.1016/j.forecast.2020.003 (Accessed: 21 May 2020).

Pantano, E., Pizzi, G., Scarpi, D. & Dennis, C. 2020. Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. Journal of Business Research, 116: 209-213. Available at: https://doi.org/10.1016/j. jbusres.2020.05.036 (Accessed: 3 April 2020).

Peters, M.A., Rizvi, F., McCulloch, G., Gibbs, P., Gorur, R., Hong, M., Hwang, Y., Zipin, L., Brennan, M., Robertson, S., Quay, J., Malbon, J., Taglietti, D., Barnett, R., Chengbing, W., McLaren, P., Apple, R., Papastephanou, M., Burbules, N., Jackson, L., Jalote, P., Kalantzis, M., Cope, B., Fataar, A., Conroy, J., Misiaszek, G., Biesta, G., Jandrić, P., Choo, S.S., Apple, M., Stone, L., Tierney, R., Tesar, M., Besley, T. & Misiaszek, L. 2020. Reimagining the new pedagogical possibilities for universities post-Covid-19. Educational Philosophy and Theory. Available at: https://www.tandfonline.com/doi/citedby/10.1080/00131857.2020.1777655?scroll=top&needAccess=true (Accessed: 30 September 2020).

Platje, J., Harvey, J.A. & Bacchus, L.R. 2020. COVID-19 – reflections on the surprise of both an expected and unexpected event. Central European Review of Economics and Management, 4(1): 149-162. Available at: https:/doi.org/10.29015/ cerem.874 (Accessed: 19 April 2020).

Quinlan, C. 2011. Business research methods. Hampshire, United Kingdom: Cengage.

Roggeveen, A.L. & Sethuraman, R. 2020. How the Covid-19 pandemic may change the world of retailing. Journal of Retailing, 96(2): 169-171. Available at: https://doi.org/10.1016/j.jretai.2020.04.002 (Accessed: 2 June 2020). Saldanha,

J. 2015. The coding manual for qualitative research. Third Edition. Arizona: Sage Publications Ltd.

Saunders, M., Lewis, P. & Thornhill, A. 2016. Research methods for business students. Seventh Edition. Cape Town: Pearson Education Ltd.

Sawahel, W. 2020. Coronavirus outbreak: what should universities be doing? University World News, 28 January. Available at: www.universityworldnews.com (Accessed: 29 March 2020).

Stephany, F., Stoehr, N., Darius, P., Neuhäuser, L., Teutloff, O. & Braesemann, F. 2020. The CoRisk-Index: a data-mining approach to identify industry-specific risk assessments related to COVID-19 in real time. arXiv preprint arXiv: 2003.12432.

Steynberg, L., Grundling, J.P., Liu, B. & Li, Y. 2020. Assessment of China's 1985-2017 higher education policy reform: nation-building directives. 3rd International Conference on Education Research and Policy (ICERP 2020), 22-25 May, Beijing, People's Republic of China.

Sutkowski, T. 2020. Covid-19 pandemic; recession, virtual revolution leading to de-globalization? Journal of Intercultural Management, 12(1): 1-11. Available at: https://doi.org/10.2478/joim-2020-0029 (Accessed: 3 April 2020).

Tonby, O. & Woetzel, J. 2020. Could the next normal emerge from Asia? Mckinsey & Company Briefing note 20 April. Available at: https://www.mckinsey.com/ featured-insights/asia-pacific/could-the-next-normal-emerge-from-asia (Accessed: 24 April 2020).

Verhoef, P.C., Kannan, P.K. & Inman, J.J. 2015. From multi-channel retailing to omni-channel retailing. Journal of Retailing, 91(2):174-181.

Yong, Q. 2020. Time for universities to show their commitment to society. University World News. Available at: https://www.universityworldnews.com/post.php?story= 20200401154815248 (Accessed: 4 April 2020).

Zhang, J.Z. & Watson, G.F. 2020. Marketing ecosystem: an outside-in view for sustainable advantage. Industrial Marketing Management, 88: 287-304. Available at: https:/doi.org/10.1016/jindmarman/2020.04/023 (Accessed: 21 May 2020).

Crisis communication initiatives between South African retailers and their stakeholders during COVID-19

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ABSTRACT

Research purpose: This paper explores how companies in the South African retail sector are reporting to their stakeholders across communication channels during the COVID-19 lockdown period with a focus on the financial implications the pandemic has had on the retail sector. The study examines how companies use different communication platforms to provide stakeholders with material information about how the effects of the pandemic on the retail sector are being managed and what communication platforms are available.

Motivation for the study: Recognising the topical nature of COVID-19, it is important to establish how companies are responding to this crisis and what communication channels are being used to disseminate information to stakeholders. This study provides an emerging COVID-19 communication matrix which can be used to assess a company's response to the pandemic and communication strategies which are prevalent. This will allow companies to identify and use different strategies based on their governance and communication objectives. It will also provide a framework from which further research can be conducted on communication strategies and, ultimately, lead to the integrated report and disclosures pertaining to the impact of the pandemic.

Research design, approach and method: This paper utilises a mixed approach to explore how companies in the South African retail sector report to the stakeholders across primary and secondary channels of communication.

Main findings: Retailers which have suffered the greatest decline in market capitalisation over the lockdown period can employ three different reporting strategies. The first entails an adaptation and conformance strategy. The second strategy limits the extent of reporting targeted at financial capital providers on the primary platform in favour of disclosures targeted at the general body of stakeholders to maintain confidence. The third strategy is described as a wait-and-see approach. For companies which have suffered the lowest decline in market capitalisation, the objective is to keep a low profile.

Practical/managerial implications: The level of reporting across communication channels selected during a crisis will impact the company's transparency and accountability to stakeholders and its ability to achieve the desired legitimacy outcome.

Contribution/value-add: Organisations can use the emerging COVID-19 communication matrix as a starting point to understand which communication strategies can be employed during a crisis.

Keywords: COVID-19; retail sector; stakeholder communication; legitimacy

ACKNOWLEDGEMENTS

The authors would like to thank Lelys Maddock for her comments and feedback on earlier versions of this paper.

INTRODUCTION

The Coronavirus (COVID-19) pandemic has caused major disruptions in social and economic activity across the globe. The South African government responded to the spread of the epidemic by replicating international practice-imposed restrictions on the sale of non-essential goods including clothing, home appliances, furniture, alcohol and cigarettes (SACoronavirus, 2020). This has resulted in the temporary closure of many businesses, especially in the retail sector, necessitating communication channels.

The governing bodies of the retail companies are responsible for monitoring and providing oversight on changing financial, operational, compliance and reputation risks, opportunities and strategies (IOD, 2016). This is especially true in the context of the pandemic. The trading restrictions imposed by lockdown regulations because of COVID-19 poses an imminent threat to business continuity and how organisations respond to the crisis will have important implications on their legitimacy. Companies in the retail sector will need to report effectively on how they are managing the impact of COVID-19 on their customers, suppliers and broader business model in order to maintain the confidence of investors and stakeholders (consider De Villiers & van Staden, 2011; Cho, Laine, Roberts & Rodrigue, 2015).

In the above context, the objective of this paper is to explore how companies in the South African retail sector are reporting on COVID-19 to their stakeholders. The research outlines the financial impact of the pandemic on the sector (gauged in terms of reduced market capitalisation) and how retail companies use the Stock Exchange News Service (SENS) announcements and details posted on corporate webpages to provide stakeholders with material information on how the effects of the pandemic are being managed.

THE COVID-19 PANDEMIC

South Africa's response to the COVID-19 pandemic was quick and strict, based on the speed of the lockdown implementation and accompanying regulations (Ramaphosa. 2020b; Stiegler & Bouchard, 2020). Within weeks from the first confirmed case of COVID-19, the President announced that (1) ports would be closed, (2) certain visas would be revoked alongside travel bans, (3) declared a state of national disaster and (4) a 21-day full national lockdown (Ramaphosa, 2020b). This reflects a co-ordinated response. The government also set up a centralised information dissemination website (https://sacoronavirus.co.za/) and began regular national broadcasts – something unusual in the South African context. The message was immediately clear that COVID-19 posed a serious social and economic threat and the government's priority is the protection of its citizens and their health (Ramaphosa, 2020b). This centralised response is in line with expectations of governmental responses to significant unforeseen crises (Singh, 2020; McConnell, 2003). Key dates are provided in Table 1.

TABLE 1
KEY DATES IN THE COVID-19 PANDEMIC

Date used for share price[1]	Event
13/01/2020	China announces first COVID-19 related death on Saturday 11 January
05/03/2020	The first COVID-19 case is detected in South Africa
11/03/2020	WHO[2] declares COVID-19 a pandemic
15/03/2020	National State of disaster is announced in South Africa on Sunday 15 March
23/03/2020	National Lockdown is announced in South Africa commencing on 27/03
17/04/2020	First extension of Level 5 national lockdown by a further 2 weeks
30/04/2020	Lockdown Level 4 (one month) with high restrictions on economic activity
25/05/2020	This is used as the "end date" for obtaining data for the study

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[1] Please note that if the key event date falls on a weekend, the first date that the market opens after that date is used for the purposes of determining the share price.

[2] World Health Organisation.

In terms of support, a fiscal and monetary package valued at roughly ZAR800bn was announced. This is being funded by (1) reallocating from non-urgent and non-priority projects, (2) providing government guarantees, (3) transferring money from social security funds, (4) borrowing additional funds and (5) altering interest rates (National Treasury SA, 2020). By 11 May, over R11bn had been paid under the Temporary Employer/Employee Relief Scheme (TERS) (Department of Employment and Labour, 2020). From a retail sector perspective, this funding will support companies through distress funding, tax reliefs, labour and employment benefits for retrenched employees, Block Exemptions to provide payment holidays/rental discounts for tenants, as well as bridge financing and loans for qualifying companies (White & Case LLP, 2020). The companies within the ambit of this study will have access to these financial relief measures which will assist in bridging the liquidity constraints during the lockdown regulations and support companies, however, liquidity and going concern issues will still be prevalent.

Table 2 provides a breakdown of how the R800bn will be utilised. Over 72% of the package will not require direct cash disbursements. This also reduces the administrative burden (and costs) required to operationalise the package. More detail on the allocation will only be available when the Finance Minister tables his updated budget in Parliament .

TABLE 2
BREAKDOWN OF SA’S FISCAL AND MONETARY RESPONSE TO COVID-19

Allocation	Amount (ZAR million)	Percentage
South Africa Reserve Bank interventions	300 000	38%
Credit guarantees scheme	200 000	25%
Job creation and support for SME and informal businesses	100 000	13%
Tax and other levy payment holidays	70 000	9%
Vulnerable household support (6 months)	50 000	6%
Wage protection (UIF)	40 000	5%
Health and frontline services	20 000	3%
Municipality support	20 000	3%
Total	800 000	

PRIOR RESEARCH AND THEORY

Different theoretical frameworks have been applied when examining how organisations faced with a crisis communicate with their stakeholders. Examples include attribution theory (Coombs, 2007a), framing theory (Benford & Snow, 2000) and, building on these, situational crisis communication theory (SCCT) (Coombs & Holladay, 2002). The latter is concerned with how different communication strategies are employed to manage views and expectations. The objective is to ‘shape attributions of the crisis, change perceptions of the organization in crisis and reduce the negative effect generated by the crisis’ (Coombs, 2007b, p. 171). Legitimacy theory provides a related framework.

Legitimacy theory has been used extensively to explain how companies internalise and respond to adverse facts, circumstances and conditions to ensure the continued support of powerful constituents (e.g. Patten, 2002; Cho, 2009; Vourvachis, Woodward, Woodward & Patten, 2016; Dube & Maroun, 2017; Corazza, Truant, Scagnelli & Mio, 2020). The theory has been used extensively by business researchers to examine how companies vary their communication with stakeholders, paying particular attention to the nature, scope and extent of disclosures included in annual, sustainability and integrated reports (De Villiers & van Staden, 2006, De Villiers & Maroun, 2018). As a result, legitimacy theory is well suited for exploring how companies are using details on their corporate webpages and SENS announcements when faced with the effects of the COVID-19 pandemic and the resulting lockdown.

Legitimacy theory in brief

Legitimacy is ‘a generalised perception or assumption’ that an organisation’s actions resonate with a socially constructed value system and are, as a result, desirable or appropriate’ (Suchman, 1995). Legitimacy rests heavily on subjective and collective assessments of powerful stakeholders so legitimacy is best described as socially constructed

(Ashforth & Gibbs, 1990, Corazza et al., 2020) and is the result of an informal contract between companies and their stakeholders (Deegan, 2002; Maroun 2017).

Legitimacy theory can be viewed from an institutional or a strategic perspective. The former frames legitimacy as a product of deeply held beliefs, cultures and values over which an organisation may have little control (Meyer & Rowan, 1977, DiMaggio & Powell, 1983; Corazza et al., 2020). In contrast, legitimacy can be interpreted as a type of strategic resource which can be managed to gain and maintain the support of key constituents (Suchman, 1995). Corporate reporting is a key part of this process.

Application of legitimacy theory to corporate reporting

Like SCCT, legitimacy theory suggests that an organisation can manage what and how it discloses information to stakeholders to inform, iterate or change their perceptions, especially when dealing with a crisis (O'Donovan, 2002; Brennan & Merkl-Davies, 2014; Beck, Dumay & Frost, 2015; Corazza et al., 2020). For example, after the Deepwater Horizon disaster in 2010, affected organisations increased the number of environmental disclosures dealing directly and indirectly with the disaster in an effort to allay stakeholders' concerns, appear responsive to the environmental damage and avoid a loss of public confidence (Summerhays & De Villiers, 2012). The same reporting strategy was followed by organisations implicated in the Exxon Valdez (Patten, 1992, 2002) and Erika (Cho, 2009) oil spills in 1989 and 1999 respectively. Similarly, in the aftermath of the Marikana crisis in 2012, Lonmin has relied extensively on its corporate reports to communicate regret for the loss of life and explain to key stakeholders how it managed the effect of the crisis (Dube & Maroun, 2017).

Using additional disclosures in the primary reports issued to stakeholders to communicate how an organisation is responding to a crisis is common when dealing with the most influential constituents. The aim is to lower information asymmetry and ensure maintaining confidence in the organisation by providing detailed and timely disclosures which directly address adverse facts or circumstances (De Villiers & van Staden, 2011; Cho et al., 2015). In other instances, an organisation may choose to limit the extent of reporting to avoid additional scrutiny or inadvertently highlighting deficiencies in how material problems are being managed (Deegan, 2002; Cho et al., 2015; Dube & Maroun, 2017; Corazza et al., 2020).

For example, Vourvachis et al. (2016) find that airlines limit the details and extent of reporting dealing with aviation disasters as part of a legitimisation strategy based on denial or marginalisation of negative events. De Villiers & van Staden (2006) and Dube & Maroun (2017) show how mining companies provide fewer details on environmental and social interventions to avoid drawing attention to non-financial problems which have not already attracted the attention of powerful stakeholders. Similar results are reported when examining the disclosures of multi-national oil and gas companies (Cho et al., 2015) and the quality of environmental reporting dealing with greenhouse gas emissions (Pitrakkos & Maroun, 2020).

In general, a careful balancing act is required which entails a trade-off between the amount of information communicated to stakeholders and where that information is disclosed. For example, De Villiers & van Staden (2011) and Cho et al. (2015) explain how financial information is a primary concern for influential stakeholders (including investors and lenders). Consequently, when faced with a crisis, disclosures deal predominantly with economic considerations and are concentrated on the primary communication platform such as the annual report, integrated report or investor updates. (see also Tregidga, Milne & Kearins, 2014; Dube & Maroun, 2017). Environmental and social disclosures are not, however, excluded because other stakeholders will expect, at least, some information on non-financial metrics. This information is communicated on secondary platforms such as corporate webpages and reports published separately from the annual or integrated reports (De Villiers & van Staden, 2011). The objective is to satisfy the expectations of less influential stakeholders, such as NGOs and civil society, for information on social and environmental performance while not providing too much detail to primary stakeholders as this may obscure or contradict communications on financial performance.

A similar process may be at work when it comes to how South African companies are engaging with their stakeholders on the implications of COVID-19. As discussed in Section 2, the ongoing pandemic is having a significant impact on the

FIGURE 1
COVID-19 COMMUNICATION MATRIX

	Stakeholder group		
Communication platform		Most influential – financial capital providers	Less influential – other stakeholders
	Primary	Disclosures focused predominantly on financial implications	
	Secondary		Disclosures dealing with the broader governance implications of the issue

local economy with the food and retail sector being particularly hard-hit by lockdowns and social distancing requirements. To maintain stakeholders' confidence in how organisations are responding to the health crisis, companies can be expected to report more frequently on COVID-19 issues. Figure 1 provides the proposed stakeholder communication model.

While codes on corporate governance call on organisations to treat economic, environmental and social issues as having equal prominence (see, IIRC, 2013; IOD, 2016, GRI, 2016), the emphasis is usually on financial concerns (Milne, Tregidga & Walton, 2009, Tregidga et al., 2014; Maroun, 2017). Consequently, providers of financial capital are regarded as the primary stakeholder group and we expect companies to provide more details on the financial impact of COVID-19 and related mitigation strategies to these stakeholders on the primary communication platforms, such as official announcements posted with the JSE. Information on the broader governance implications is likely to be focused at the secondary group of stakeholders and provided on platforms such as company webpages (De Villiers & van Staden, 2011; Zhou, Simnett & Green, 2017).

METHOD

This paper uses a mixed approach to explore how companies in the South African retail sector report to the stakeholders on the impact of COVID-19. Retail companies listed on the Johannesburg Stock Exchange were aggregated by sub-sector including beverages, food and drug retailers, food producers, general retailers and personal goods. In total, 44 companies were identified and included in the final analysis. Content analysis is used to provide a detailed and systematic approach to the contents of the stakeholder crisis communication analysis in order to identify trends in the communication method. A quantitative aspect was incorporated into the study through analysing share price movements and frequencies of disclosures made by companies via communication platforms. The study retains a qualitative and exploratory focus, seeking to describe the communication methods and analyse the content of this developing phenomenon.

Data were collected in two phases. First, changes in the market values for the retail sub-sectors are computed and used to provide a sense of the financial impact of COVID-19. Second, COVID-19 communications per SENS announcements and company webpages are analysed.

The prior research usually regards financial statements (De Villiers & van Staden, 2011) or integrated reports (Atkins & Maroun, 2015) as the primary basis for formal reporting to primary (financial capital providers) stakeholders. Not all of the companies under review had prepared their latest financial statements and integrated reports when COVID-19 lockdowns were announced. Consequently, SENS announcements were analysed because these are an official basis for reporting to stakeholders and regulated by the local stock exchange. Consistent with the prior research, webpages are treated as a secondary communication platform (De Villiers & van Staden, 2011; Zhou et al., 2017).

Data were analysed using interpretive text analysis as not all the content was presented in a consistent format. The method was also suitable for dealing with disclosures which varied significantly in terms of content and structure (Beattie, 2014, Guthrie, Petty, Yongvanich & Ricceri, 2004). Paragraphs were used as the unit of analysis, rather than individual words to avoid misinterpreting context or meaning (ibid).

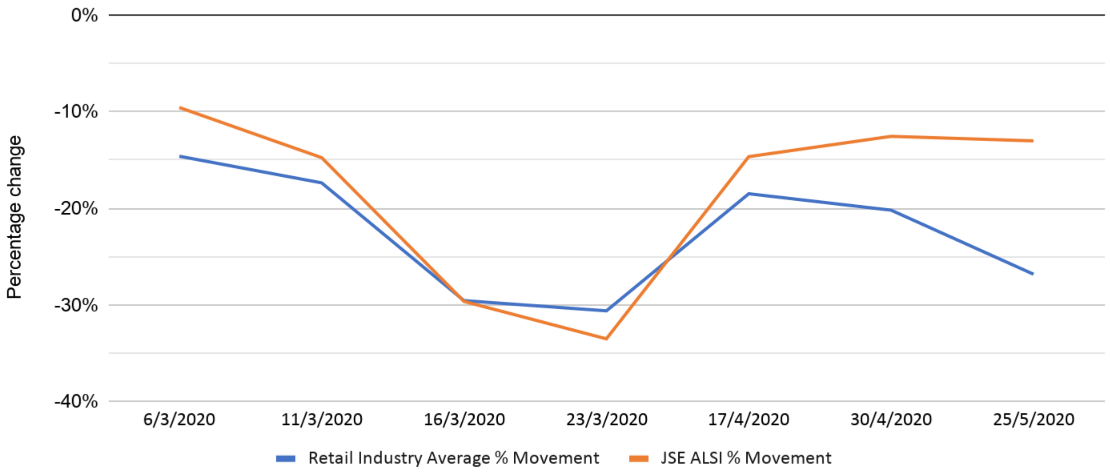
SENS announcements were downloaded from the JSE and coded according to content. Examples of codes include details on dividends, financial results, donations, credit rating, COVID-19 updates, operational updates, and compliance with the Companies Act (2008) other regulations. Corporate webpages were analysed similarly. The disclosure codes were recorded on a theme register and aggregated by principle/theme. The frequencies of disclosures themes were recorded. To retain an exploratory focus, scientific text analysis and inferential statistics were not run ; instead, companies were ranked according to the amount and type of information provided on COVID-19 and the platform used to disseminate that information (SENS announcements or webpages). A 2 x 2 matrix (as presented in Figure 1) was used to differentiate COVID-19 reporting by the South African retail industry. Results are also presented graphically and include details on changes in share value to highlight the associations between financial impact and stakeholder communication on COVID-19.

The data collected were reasonably accurate with regards to the characteristics of the entities being studied as the share price was obtained from reputable sources whilst the SENS announcements and corporate webpages were directly analysed from the relevant sources and coded into specific categories (validity). The data were also consistent across the entities which allowed for patterns to be identified in communication strategies among the retail companies under investigation (reliability). Because of the fact that both primary and secondary sources of communication methods were used in conjunction with the share price movements of the entity, this allowed for the sources to be triangulated into distinct categories for each entity, enhancing the validity and reliability of information. As this was an exploratory study, there was no inherent confirmation bias present and companies were objectively assessed by more than one researcher. Results were compared and any differences were discussed among the researchers and then resolved. The final data were grouped into communication categories. This process was also subject to review by the research team to ensure consistent allocation. As all of the data were subject to review and all of the differences resolved, intercoder reliability was not tested statistically. The study focuses on retail entities listed on the JSE which ensures that the data published is valid and reliable.

RESULTS

To evaluate the immediate financial impact of COVID-19, the researchers tracked changes in the share prices from the fixed point of 13/1/2020 for the 44 retail sector companies over the period outlined in Table 1. These are compared with changes in the JSE All-Share Index (ALSI). Refer to Figure 2.

FIGURE 2
PERCENTAGE REDUCTION IN SHARE PRICE



The trend in the retail industry is consistent with the overall market movements. The JSE ALSI and Retail Industry Average dropped by 10% and 15% respectively from 13 January 2020 to 6 March 2020 when the first case of COVID-19 was noted in South Africa. The indices recorded their lowest values on 23 March 2020 with the announcement of the country's national lockdown. There is some recovery from 23 March 2020 to 17 April 2020 but both the JSE ALSI and retail companies under review were trading at a lower value than at the beginning of the year, indicating that a full recovery has not occurred.

From 17 April 2020 to 25 May 2020, the retail industry average falls further while the JSE ALSI remains relatively flat and stable. Between 17 April 2020 and 30 April 2020, the lockdown was extended. Only essential services continued to operate, including food producers. At this point, the initial stockpiling of essential goods taking place at the start of the pandemic subsided. The initial spike in demand was short-lived and, as the market adjusted for the impact of the extended lockdown on long-term consumer spending, by 30 April 2020 market capitalisations declined 20% from the initial point of 13 January 2020.

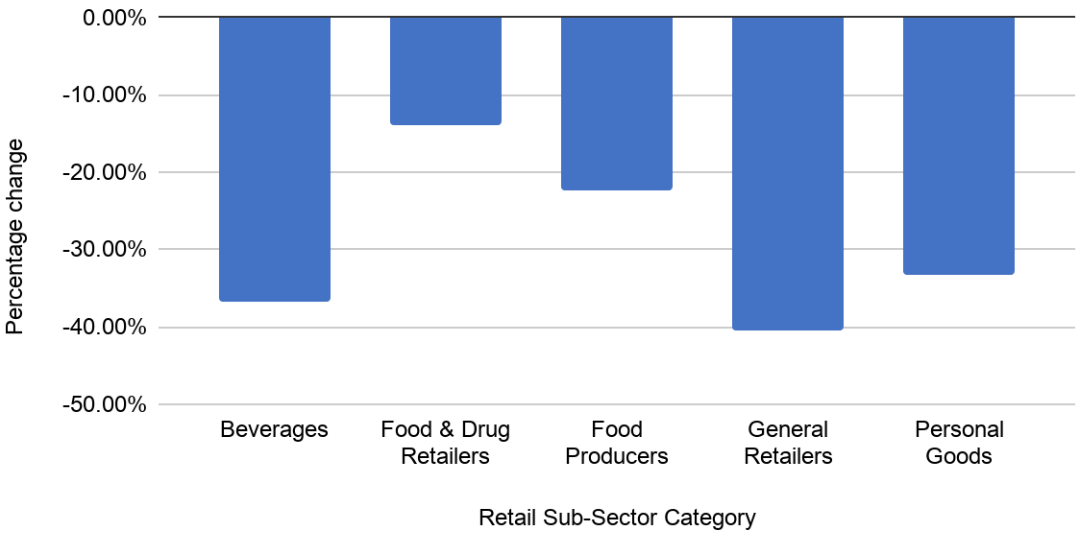
From 30 April 2020, there was a relaxation of some restrictions, particularly with regards to online sales of certain items. This allowed retailers with online sales platforms to trade more actively. A reduction in disposable income, coupled with a negative market outlook, resulted in a further devaluation of the share price with the retail sector trading at a reduction of 27% of the value on 13 January 2020.

It is difficult to distinguish between the final impact of COVID-19 and the credit rating downgrade by Moody's on 27 March 2020. It should, however, be noted that Standard & Poor's and Fitch had already downgraded South Africa to junk status in prior years, with the move by Moody's largely anticipated by the capital market. Alsakka & Gwilym (2011) note that the impact of a change in rating agencies' outlooks is greater than the actual rating changes with Kraussl (2005) finding that a rating change which has already been anticipated by a market results in a lower impact on asset prices. This is also supported by recent studies (see Poon & Shen, 2020), where agencies provide forward looking outlooks in advance, allowing the market to anticipate and react to changes before these take place. This naturally reduces the impact when the credit rating does take place. As a result, the effects of COVID-19 on the JSE ALSI and retail industry average per Figure 2 is probably more pronounced than Moody's final decision to downgrade South Africa to sub-investment status.

Figure 3 shows the total movement in the average share prices from 13 January to 25 May per retail sub-sector.

Only essential goods and services could be supplied between 27 March and 30 April. The beverages, general retailers and personal goods sub-sector were the most adversely affected. The relaxation of some lockdown measures did not result in a recovery for these sub-sectors. Food producers and food and drug retailers have continued to operate during the lockdown and, as a result, have reported a lower reduction in share prices .

FIGURE 3
SHARE PRICE MOVEMENT PER SUB-SECTOR

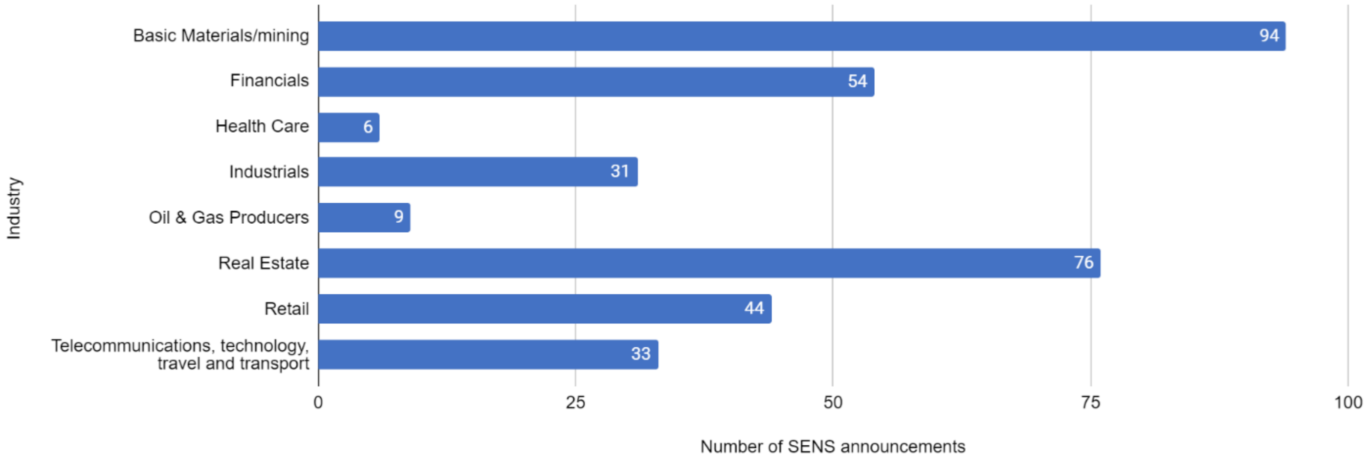


SENS announcements

As discussed in Section 2, companies use their integrated and sustainability reports to explain how they are responding to social and environmental disasters (Patten, 2002; De Villiers & Maroun, 2018). They can also use their webpages, social media and press releases to keep stakeholders informed (Zhou et al., 2017). SENS announcements offer an additional platform for disseminating information formally and quickly to the capital market. They are a quick and effective means of updating market participants on important developments which can affect an organisation's share price.

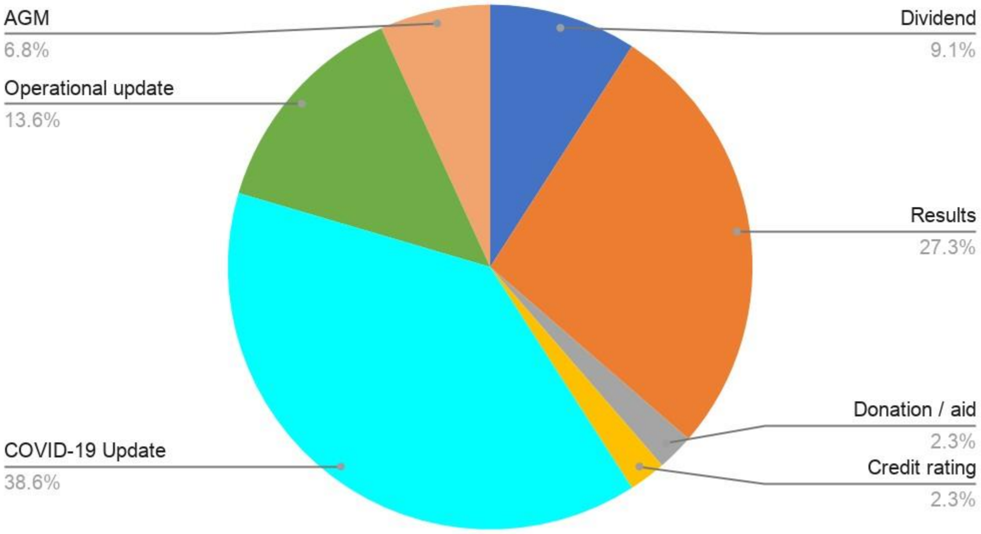
Twenty-three of the 44 retail companies issued SENS announcements dealing directly or indirectly with the implications of COVID-19. Figure 4 shows that companies in the basic materials and mining sector posted the greatest number of SENS announcements (94) followed by real estate (76) and financial services (54). The retail sector posted 44 announcements.

FIGURE 4
SENS ANNOUNCEMENTS PER INDUSTRY



Per Figure 5, financial results were reported in 27% of the announcements. Similarly, operational updates accounted for 14% of the SENS posts. These posts excluded references to COVID-19. Just under 10% of the announcements dealt with dividend and annual general meetings.

FIGURE 5
CORE THEMES IN THE SENS ANNOUNCEMENTS

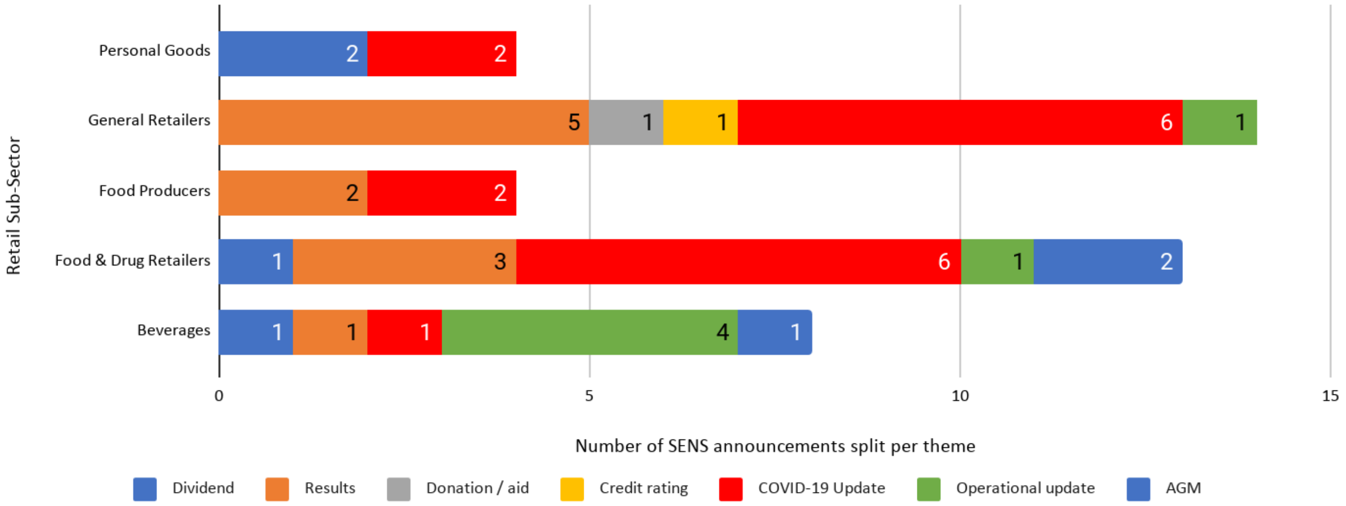


Approximately 40% of the SENS announcements provided updates on the pandemic and details of its impact on the respective businesses. Examples included :

- updates on the impact of COVID-19 in the context of current trading performance and market conditions in light of the pandemic and its impact on costs, liquidity, debt covenants, working capital, strategic initiatives, supply chains and prospects (Bid Corporation; Super Group; Imperial Holdings; Woolworths; Famous Brands; Massmart; Mr Price; Distell Group);
- safeguards to be implemented to curb the spread of the virus at operations functioning over the lockdown (Tiger Brands; Famous Brands; Woolworths);
- details on how online channels were being used to service customers and ensure the continuation of operations (Woolworths; Massmart; Distell Group) and
- donations provided to specific COVID-19 relief funds.

Announcements dealing specifically with COVID-19 were complemented by information on the indirect impact of the pandemic. Common examples included dividend policy revisions, postponements of annual general meetings (AGMs) and delays in publishing financial results. This platform, as a result, primarily contains information focused on financial providers of capital assessing the financial implications. SENS announcements by sub-sector are reported in Figure 6.

FIGURE 6
RETAIL SUB-SECTOR SENS ANNOUNCEMENTS PER THEME

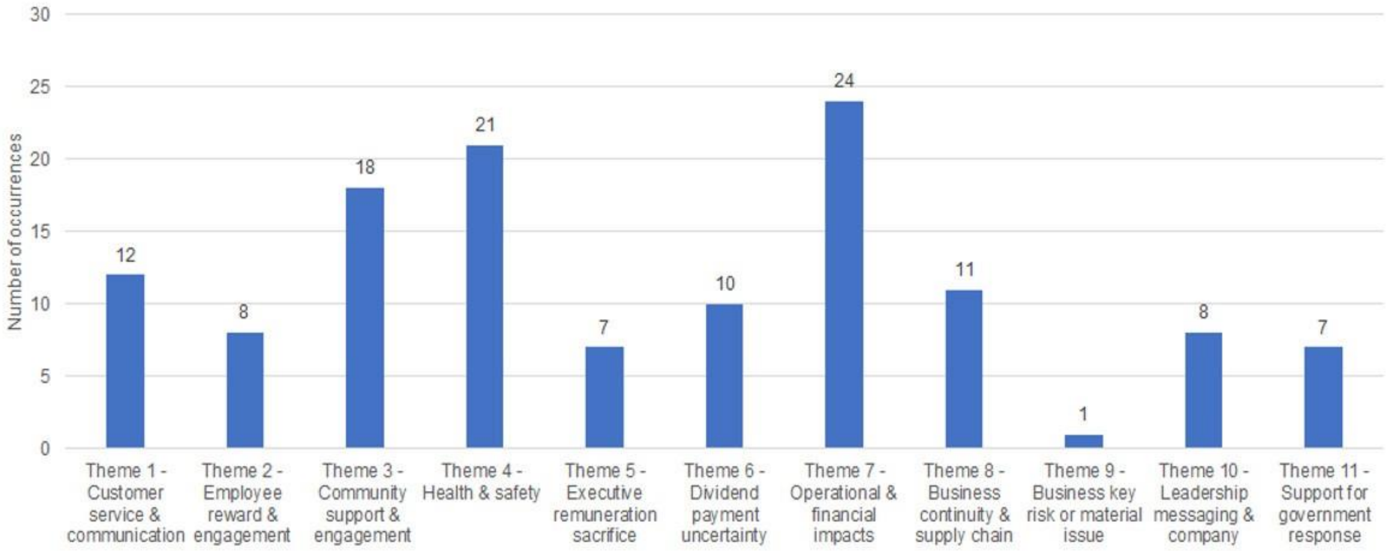


General retailers (who also noted the largest decrease in the average share price per Figure 3) released the highest number of SENS announcements. Food producers and personal good retailers released fewest announcements. For companies forced to suspend operations over the lockdown, there is relatively little to report to stakeholders and SENS announcements deal primarily with administrative and general financial issues such as the logistics for AGMs and the publication of financial results which would have been released notwithstanding the pandemic. In contrast, general and food and drug retailers provided more details dealing specifically with COVID-19. These companies continued to operate over the full period under review and reported lowest decline in share prices (see Figure 3) but, at the same time, are exposed to the immediate operational risks associated with the spread of the virus. To keep stakeholders informed, they provide more detail on how their operations and supply lines have been impacted by the pandemic and on the steps being taken to protect the health of staff and customers.

Webpage details

Coding of company webpage content revealed 11 broad themes dealing directly or indirectly with COVID-19. The frequency of disclosures per theme is reported in Figure 7.

FIGURE 7
WEBPAGE COVID-19 THEMES ACROSS RETAIL STUDY GROUP



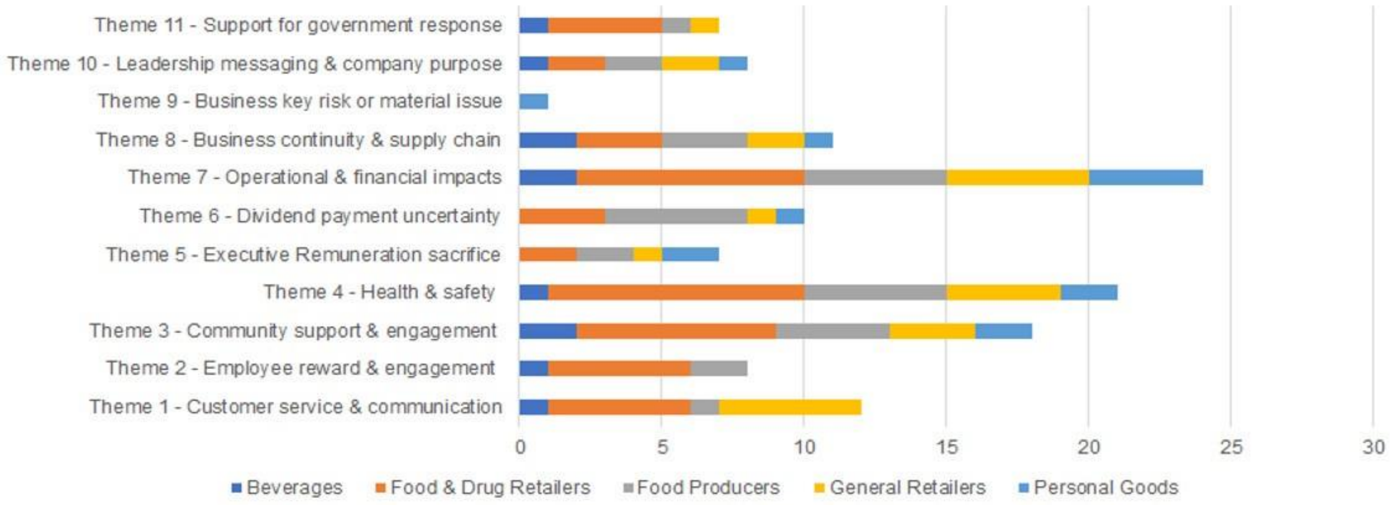
Theme 7: operational and financial impacts recorded the highest frequency of disclosure (19%). Despite SENS announcements dealing with the economic implications of the pandemic, webpage content is also focused on financial capital providers (see Dumay et al., 2016). Disclosures dealing with health and safety are the next most common theme (Theme 4 which is 17% of total disclosures). Companies are trying to reassure stakeholders that steps are being taken to prevent the transmission of COVID-19 to employees and customers. Approximately 14% of the disclosures discuss community support and engagement (Theme 3) which demonstrate how retail companies are working to reduce the impact of the pandemic on employees, their families and the most vulnerable members of society.

There was only one instance where COVID-19 was identified as a material business risk

(Theme 9) probably because many organisations were, at the time of collecting data, still trying to assess the impact of the pandemic on their business models. Nevertheless, this theme was covered by the SENS announcements (Section 5.1) suggesting that the analysis of how COVID-19 is affecting business operations is being aimed at providers of financial capital rather than the general body of stakeholders.

Figure 8 shows the frequency of disclosure themes per sub-sectors. All sub-sectors reported on matters such as business continuity, financial impact, health and safety and community engagement to, at least, some extent. Food and drug retailers show a high frequency of disclosures particularly with regards to health and safety as they have been required to operate throughout the pandemic. Detailing the safeguards is paramount to maintaining the public's trust in their products. This is followed by the food producers and general retailers whose public presence (via secondary platforms) was high throughout the pandemic. Personal goods, with a limited presence during the lockdown, have least disclosure on webpages as updates were dependent on when they could reopen.

FIGURE 8
COVID-19 WEBPAGE THEMES BREAKDOWN PER RETAIL SUB-SECTOR

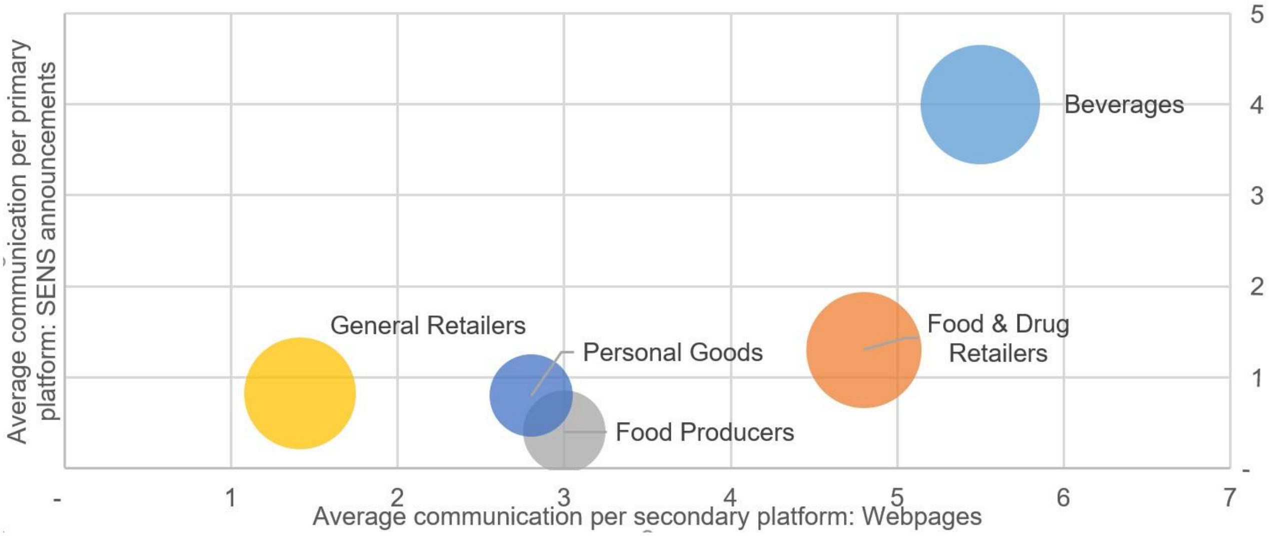


The relationship between financial impact and reporting to stakeholders

Figure 9 highlights the relationship between the average number of SENS announcements (y-axis) and webpage disclosures (x-axis) per retail sub-sector. The overall reduction in market capitalisation is depicted by the size of each sub-sector's plot.

Beverages reported the largest reduction in share value and has also reported most information to stakeholders on both primary and secondary platforms. Given the direct and material impact of COVID-19 on the sector's economic viability, an avoidance strategy cannot be used to deal with the pandemic (consider Patten, 2002; Dube & Maroun, 2017). The organisations must respond by reassuring investors and other stakeholders that steps are being taken to ensure business continuity. At the same time, there is considerable uncertainty about how to manage the short-, medium- and long-term implications of the lockdowns (Atkins, Doni, Hassan & Maroun, 2020). Companies in the sub-sector respond with a broad reporting strategy which signals that they are trying to manage the crisis proactively and are ready to adapt as circumstances change. SENS announcement and webpage content cover many issues, such as the changing financial and operating plans; ensuring the health and safety of employees; community engagement and customer service (see Suchman, 1995; Deegan, Rankin & Tobin, 2002; Maroun, 2017).

FIGURE 9
COVID-19 IMPLICATIONS ON RETAIL SUBSECTOR AND RELATED COMMUNICATION



Food and drug retailers also report an above-average decline in market capitalisation, all the same, their operations are impacted less adversely than companies in the beverages sub-sector because they have been able to operate throughout the lockdown. In the context of less uncertainty, food and drug retailers do not rely on SENS announcements to keep financial capital providers updated to the same extent as do companies in the beverages sub-sector. Webpage content focuses on matters such as employee health and safety and other operational considerations which are important for mitigating the cost of conducting business during the pandemic. Companies must acknowledge COVID-19 as a material but non-recurring challenge which requires, at least, some reporting to stakeholders. Given the magnitude of the pandemic, denying its relevance to an organisation's business model will be ineffective for maintaining legitimacy. At the same time, a balance must be struck between communicating effectively and creating doubt. On one hand, food and drug retailers must demonstrate that reasonable steps are being taken to keep employees, suppliers and customers safe while operations continue during the lockdown. On the other, maintaining the primary stakeholder group's confidence in the ability of the organisations' managers to identify and mitigate financial risks is imperative (see De Villiers & van Staden, 2006; Cho et al., 2015; Maroun, Usher & Mansoor, 2018). As a result, SENS announcements targeted at financial capital providers are de-emphasised while reporting on secondary platforms targeted at the broader stakeholder committee is increased.

Personal goods and food producers reported the lowest decline in market capitalisation because of COVID-19. Given their relatively stronger position, they adopt a strategy which limits the extent of reporting on both the primary and secondary communication platforms. With the consequences of the pandemic for the South African economy still unclear, too much reporting may attract unwanted scrutiny or be misinterpreted as an indication that underlying challenges in the two sub-sectors are more severe than stakeholders have assumed (see Suchman, 1995; De Villiers & van Staden, 2006; Maroun, 2017; Corazza et al., 2020).

Finally, general retailers follow a similar reporting strategy to personal goods and food producers despite an above average decline in market capitalisation. They had the lowest average level of disclosures on the primary and secondary platforms of all the sub-sectors. This is probably because the general retailers include organisations which have had operations completely suspended by the lockdown. Despite the direct economic consequences of the pandemic, the companies have little choice but to wait for business to resume before the impact of COVID-19 can be determined. Rather than adding to existing concerns, the companies take a conservative 'wait-and-see' approach to their reporting and communication with stakeholders.

SUMMARY AND CONCLUSION

COVID-19 has had an immediate and material economic impact on the South African retail sector. At the time of writing this paper, there are indications that lockdown measures will be relaxed but consumer spending is expected to remain depressed and long-term economic recovery will be slow (Deloitte, 2020). In the context of increased uncertainty associated with the pandemic, local retailers have taken different approaches when reporting to stakeholders. Reporting strategies via communication channels are summarised in Figure 10.

Retailers which have suffered the greatest decline in market capitalisation over the lockdown choose from three reporting strategies. The first entails reporting broadly on primary and secondary platforms in terms of an adaptation and conformance strategy. The second limits the extent of reporting targeted at financial capital providers on the primary platform in favour of disclosures targeted at the general body of stakeholders. This is designed to maintain confidence. The third is described as a wait-and-see approach and is most common among entities which have been unable to operate during the lockdown. For companies which have suffered the lowest decline in market capitalisation, the objective is to keep a low profile. Reporting on both communication platforms is limited as this may result in unwanted or unexpected attention from investors and other stakeholders.

The results show how retail companies report in SENS announcements and on corporate webpages which provide important insights into the strategies being used to manage legitimacy. In addition to being an important means for marketing their offerings, the reporting to stakeholders via the communication platforms is also important for understanding how companies present themselves to their stakeholders.

FIGURE 10
EMERGING COVID-19 COMMUNICATION MATRIX

		Narrow coverage	Broad coverage
COVID-19 impact	Lower than average	Food producers, personal good producers • Strategy – keep a low profile • Limit reporting on primary and secondary platforms	
	Higher than average	Food and drug retailers • Strategy – maintain the confidence of primary stakeholders • Limit reporting on the primary platform to avoid concerning investors and creditors • Increase reporting on secondary platforms to reassure stakeholders that steps are being taken to keep employees, suppliers and customers safe General retailers • Strategy – wait and see • Limit reporting on primary and secondary platforms	Beverages: • Strategy - adapt and conform • Report broadly on primary and secondary platforms • Keep all stakeholders informed of challenges to signal that the organisation is ready to respond to the crisis

The following managerial implications of the study are noted:

- From a theoretical point of view, the study offers a framework for researchers to explore the communication methods and strategies available in a crisis and, specifically, looks at the initial ramifications of the COVID-19 pandemic. This study can be expanded in terms of the period under review, the various levels of lockdown, as well as incorporating different sectors of the JSE.
- The study highlights the initial financial implications of the pandemic and how stakeholder communication strategies are pertinent. From a practical perspective, entities are able to identify the extent of the impact of COVID-19 on their business (with this study using share price movements as a proxy for financial impact) to determine which communication strategy can be appropriate in line with their governance and strategies and determine which strategy can be appropriate. Entities can also identify different strategies used within the retail sector and assess whether or not these are suitable based on their underlying legitimacy objectives. Stakeholders have an expectation to be informed on the company’s response to the crisis and to have relevant and reliable information provided.
- Entities will have an obligation to inform stakeholders about how the pandemic has impacted operations and future viability. This will ultimately have implications on the direction of the disclosure in the integrated reports and will reflect on the transparency and governance processes of the entity.

This paper has explored a developing framework on the initial communication strategies of entities within the South African retail sector and their stakeholders during the COVID-19 lockdown period. The research outlines the financial impact of the pandemic on the sector and how retail companies use different communication platforms to provide stakeholders with material information on how the effects of the pandemic are being managed. The long-term impact of COVID-19 on the retail sector remains to be seen. The financial, social, environmental and governance implications of the pandemic will need to be studied in conjunction with how COVID-19 changes consumer behaviour to appreciate more fully how pandemics alter the retail sector.

REFERENCE LIST

Alsakka, R. & Gwilym, O. 2011. Rating agencies' signals during the European sovereign debt crisis: Market impact and spillovers. Journal of Economic Behaviour and Organisation, 85, 144-162.

Ashforth, B. E. & Gibbs, B. W. 1990. The Double-Edge of Organisational Legitimation. Organization Science, 1, 177-194.

Atkins, J., Doni, F., Hassan, A. & Maroun, W. 2020. Enhancing biodiversity, protecting species and reducing habitat loss saves lives and markets: Making pandemic risk explicit in extinction accounting and extinction engagement frameworks. Available: https://www.wits.ac.za/media/wits-university/faculties-and-schools/commerce-law-and-management/accountancy/documents/Accounting%20governance%20and%20integrated%20thinking%20in%20the%20context%20of%20COVID-19%20(FInal).pdf [Accessed 10 June 2020].

Atkins, J. & Maroun, W. 2015. Integrated reporting in South Africa in 2012: perspectives from South African institutional investors. Meditari Accountancy Research, 23, 197-221.

Beattie, V. 2014. Accounting narratives and the narrative turn in accounting research: Issues, theory, methodology, methods and a research framework. The British Accounting Review, 46, 111-134.

Beck, C., Dumay, J. & Frost, G. 2015. In Pursuit of a 'Single Source of Truth': from Threatened Legitimacy to Integrated Reporting. Journal of Business Ethics, 141(1), 191-205.

Benford, R. D. & Snow, D. A. 2000. Framing Processes and Social Movements: An Overview and Assessment. Annual Review of Sociology, 26, 611-639.

Brennan, N. & Merkl-Davies, D. 2014. Rhetoric and argument in social and environmental reporting: the Dirty Laundry case. Accounting, Auditing & Accountability Journal, 27, 602-633.

Cho, C. H. 2009. Legitimation Strategies Used in Response to Environmental Disaster: A French Case Study of Total SA's Erika and AZF Incidents. European Accounting Review, 18, 33-62.

Cho, C. H., Laine, M., Roberts, R. W. & Rodrigue, M. 2015. Organized hypocrisy, organizational façades, and sustainability reporting. Accounting, Organizations and Society, 40 (0), 78-94.

Coombs, W. T. 2007a. Attribution Theory as a guide for post-crisis communication research. Public Relations Review, 33(2), 135-139.

Coombs, W. T. 2007b. Protecting Organization Reputations During a Crisis: The Development and Application of Situational Crisis Communication Theory. Corporate Reputation Review, 10, 163-176.

Coombs, W. T. & HOLLADAY, S. J. 2002. Helping Crisis Managers Protect Reputational Assets:Initial Tests of the Situational Crisis Communication Theory. Management Communication Quarterly, 16, 165-186.

Corazza, L., Truant, E. Scagnelli, S., & Mio, C. 2020. Sustainability reporting after the Costa Concordia disaster: a multi- theory study on legitimacy, impression management and image restoration. Accounting, Auditing & Accountability Journal [online]. Available https://www.emerald.com/insight/content/doi/10.1108/AAAJ-05-2018-3488/full/html. [Accessed 25 August 2020].

De Villiers, C. & Maroun, W. 2018. Sustainability Accounting and Integrated Reporting, Oxfordshire, UK, Taylor & Francis. De

Villiers, C. & van Staden, C. J. 2011. Where firms choose to disclose voluntary environmental information. Journal of Accounting and Public Policy, 30, 504-525.

De Villiers, C. & van Staden, C. J. 2006. Can less environmental disclosure have a legitimising effect? Evidence from Africa. Accounting, Organizations and Society, 31 (8), 763-781.

Deegan, C. 2002. Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. Accounting, Auditing & Accountability Journal, 15, 282-311.

Deegan, C., Rankin, M. & Tobin, J. 2002. An examination of the corporate social and environmental disclosures of BHP from 1983-1997. Accounting, Auditing & Accountability Journal, 15 (3), 312-343.

Deloitte. 2020. Recovering from COVID-19. Considering economic scenarios for resilient leaders. [Online]. Available at: https://www2.deloitte.com/content/dam/Deloitte/za/Documents/about-deloitte/za-Deloitte-Scenarios-for-Resilient- Leaders-April-2020-2.pdf. [Accessed 25 June 2020].

Department of Employment and Labour. 2020. Department of Employment and Labour praised for prompt payment of Covid-19 TERS benefits. SA Government.

Dimaggio, P. & Powell, W. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. American Sociology Review, 48, 147-160.

Dube, S. & Maroun, W. 2017. Corporate social responsibility reporting by South African mining companies: evidence of legitimacy theory. South African Journal of Business Management, 48 (1), 23-34.

Dumay, J., Bernardi, C., Guthrie, J. & Demartini, P. 2016. Integrated reporting: a structured literature review. In: Accounting Forum, 2016. Elsevier, pp 166-185.

GRI. 2016. Consolidated set of GRI sustainability reporting standards (2016). Available: https://www.globalreporting.org/standards/gri-standards-download-center/?g=ae2e23b8-4958-455c-a9df-ac372d6ed9a8 https://www.globalreporting.org/reporting/g4/Pages/default.aspx [Accessed 10 February 2017].

Guthrie, J., Petty, R., Yongvanich, K. & Ricceri, F. 2004. Using content analysis as a research method to inquire into intellectual capital reporting. Journal of Intellectual Capital, 5, 282-293.

IIRC. 2013. The International Framework: Integrated Reporting. Available: http://www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf [Accessed 1 October 2013].

IOD 2016. King IV Report on Corporate Governance in South Africa, Lexis Nexus South Africa, Johannesburg, South Africa. JSE.

2020a. SENS Announcements [Online]. South Africa: JSE. Available: https://www.jse.co.za/services/sens-announcement. [Accessed 30 May 2020].

JSE. 2020b. What is the JSE All Share Index (ALSI)? [Online]. South Africa: JSE. Available: https://www.jse.co.za/grow- my-wealth/what-is-the-jse-all-share-index. [Accessed 30 May 2020].

Kraussl, R. 2005. Do credit rating agencies add to the dynamics of emerging market crises? Journal of Financial Stability, 1 (3), 355-385.

Maroun, W. 2017. Why organizations voluntarily report–legitimacy theory. Sustainability Accounting and Integrated Reporting. ROUTLEDGE in association with GSE Research. 25-35.

Maroun, W., Usher, K. & Mansoor, H. 2018. Biodiversity reporting and organised hypocrisy: The case of the South African food and retail industry. Qualitative Research in Accounting & Management, 15 (4), 437-464.

McConnell, A. 2003. Overview: Crisis management, influences, responses and evaluation. Parliamentary affairs, 56, 363-409.

Meyer, J. W. & Rowan, B. 1977. Institutionalized Organizations: Formal Structure as Myth and Ceremony. American Journal of Sociology, 83, 340-363.

Milne, M., Tregidga, H. & Walton, S. 2009. Words not actions! The ideological role of sustainable development reporting. Accounting, Auditing and Accountability Journal, 22, 1211-1257.

National Treasury SA. 2020. Briefing by the Naitonal Treasury on financial implications of COVID-19 on both the economy and budget. National Treasury SA.

O’Donovan, G. 2002. Environmental disclosures in the annual report. Accounting, Auditing & Accountability Journal, 15, 344-371.

Patten, D. M. 2002. The relation between environmental performance and environmental disclosure: a research note. Accounting, Organizations and Society, 27 (8), 763-773.

Patten, D. M. 1992. Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory. Accounting, Organizations and Society, 17, 471-475.

Pitrakkos, P. & Maroun, W. 2020. Evaluating the quality of carbon disclosures. Sustainability Accounting, Management and Policy Journal, 11, 553-589.

Poon, W.P.H & Shen, J. 2020. The roles of ratings outlooks: the predictor of credit worthiness and the monitor of recovery efforts. Review of Quantitative Finance and Accounting. [online]. Available https://doi.org/10.1007/s11156-019-00868-7.

Ramaphosa, C. 2020a. Statement by president cyril ramaphosa on further economic and social measures in response the covid-19 epidemic. SA Government.

Ramaphosa, C. 2020b. Statement by President Cyril Ramaphosa on measures to combat COVID-19 epidemic. SA Government.

SAcoronavirus. 2020. COVID-19 Risk Adjusted Strategy. [Online]. Available at: https://sacoronavirus.co.za/covid-19-risk- adjusted-strategy/. [Accessed 25 June 2020].

Stiegler, N. & Bouchard, J.P. 2020. South Africa: Challenges and successes of COVID-19 lockdown. Ann Med Psychol (Paris). [online]. Available: https://doi.org/10.1016/j.amp.2020.05.006.

Singh, J.A. 2020. How South Africa's Ministerial Committee on COVID-19 can be optimised. South African Medical Journal, [online] 110 (6), 571-610. Available: Available from: <http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S0256-95742020000600020&lng=en&nrm=iso>. ISSN 2078-5135. http://dx.doi.org/10.7196/SAMJ.2020.v110i6.14911. [Accessed 25 August 2020].

Suchman, M. C. 1995. Managing Legitimacy: Strategic and Institutional Approaches. The Academy of Management Review, 20 (3), 571-610.

Summerhays, K. & De Villiers, C. 2012. Oil Company Annual Report Disclosure Responses to the 2010 Gulf of Mexico Oil Spill. Journal of the Asia-Pacific Centre for Environmental Accountability, 18, 103-130.

Tregidga, H., Milne, M. & Kearins, K. 2014. (Re)presenting 'sustainable organizations'. Accounting, Organizations and Society, 39, 477-494.

Vourvachis, P., Woodward, T., Woodward, D. G. & Patten, D. M. 2016. CSR disclosure in response to major airline accidents: a legitimacy-based exploration. Sustainability Accounting, Management and Policy Journal, 7, 26-43.

White and Case LLP.2020. COVID-19 South African Government Financial Assistance Measures. [online]. Available: https://www.whitecase.com/publications/alert/covid-19-south-african-government-financial-assistance-measures. [Accessed 26 August 2020].

Zhou, S., Simnett, R. & Green, W. 2017. Does Integrated Reporting Matter to the Capital Market? Abacus, 53 (1), 94-132.

The Effect of COVID-19 on Small Retail Businesses in Alice Town, South Africa

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ABSTRACT

This paper aims to assess the effect of COVID-19 on small retail businesses in Alice Town, South Africa. The research methodology utilized includes the interpretivism paradigm, an exploratory research design and a qualitative research approach. The population included small business retail owners and or managers in Alice Town, South Africa. Purposive random sampling technique was utilized. The data was collected from owners/managers of small businesses using an in-depth semi-structured interview and analyzed through thematic content analysis. The findings indicated that COVID-19 negatively affected the performance of small businesses in South Africa. Whereas the study recommends the need for government to improve on the information dissemination strategy which will ensure information that relates to small business relief schemes in the country gets to the end-users.

Keywords: Corona Virus Disease; COVID-19; Small Business; Raymond Mhlaba

INTRODUCTION

The effect of the coronavirus disease (COVID-19) on small businesses has led to a growing interest amongst various academics and industry leaders. Debates has emanated on the the effect of COVID-19 on small businesses (Kalidas, Magwentshu & Rajagopaul, 2020). The cash flow of small businesses continues to dwindle and remains a major challenge during this COVID-19 period. To ease the effect of COVID-19 on small businesses, the government of South Africa introduced some interventions to support small businesses(Kalidas et al., 2020). Nevertheless, there is no certainty if these interventions are effective in supporting the performances of retail small businesses (Monson, 2020).

Small businesses are perceived to be the main drivers of every economy around the world (Kalidas et al., 2020). Like in the United States, small business accounts for 99.7% of all companies, which implies that as at 2012, 5.73 million business organizations are in the United States(US), while 5.71 million were viewed as micro businesses (US census Bureau: Business encyclopedia,2020). However, organizations with less than 20 workers covered 89.6% of all business organizations and despite this, in 2013, there were 23 million business organizations without workers, which means that the proprietor is the only worker in such organization (Business encyclopedia,2020). In South Africa, according to Organisation for Economic Co-operation and Development (2020), the microenterprises accounts for fifty-five per cent of official employment, compared to forty per cent from big companies (while the remaining five percent employees do not know the size of their employer). The new definition of Small Medium Enterprises (SMEs) according to Philip de Wet (2019) describes SMEs using the number of employees and annual turnover. In addition, businesses are considered micro if the businesses can have a maximum of ten workers (Oni & Fatoki, 2013). While, small businesses employ between eleven and fifty workers and medium sized businesses can employ between fifty-one and two hundred and fifty workers (Kalidas et al., 2020). However, in terms of turnover, a maximum turnover of R20 million for micro-business, R80 million for small and R220 million for medium businesses are applicable for the wholesale sector (Phillip de Wet, 2019). The retail, motor trade and repair services sector have a maximum turnover of R7.5Million for micro, R25 Million for small and R80 million for medium businesses (Phillip de Wet, 2019). Small businesses remain the key potential driver for job creation, equality and innovation in South Africa, but this has been threatened with the current pandemic (COVID-19) ravaging the world (Kalidas et al., 2020).

The COVID-19 pandemic according to the United Nation Development Programme (2020) is the fundamental universal health challenges of our time and the highest predicament the world has faced since World War II. Since the emergence of the virus in Asia late last year, the virus has spread to every continent except Antarctica. Cases are rising daily in Africa, America, and Europe (UNDP,2020). What then is COVID-19? As stated by the Department of Health, Republic of South Africa website (2020), COVID-19 are a vast group of infections which may cause respiratory contaminations going from the basic virus to increasingly extreme sicknesses, for example, SARS (Severe Acute Respiratory Syndrome), MERS (Middle East Respiratory Syndrome), and the latest Coronavirus ailment is COVID-19. The normal indications or symptoms of the virus include the following: fever, trouble breathing, respiratory side effects and cough etc (WebMD,2020).

As a strategy to reduce the impact of this pandemic on her citizens, the Government of South Africa on the 26th of March 2020, moved swiftly and instituted a national lockdown on the entire country (Goitom, 2020). However, offices, small and medium businesses, government parastatals, institutions of learning etc were all shut down except, the essential services providers i.e. the health sector, security agencies etc. It is, therefore, against this backdrop that this study tends to investigate the effect of COVID-19 on small retail businesses in Alice Town, South Africa.

THE OBJECTIVE OF THE STUDY

This paper aims to assess the effect of COVID-19 on small retail businesses in Alice Town, South Africa. The specific objectives are:

1. to assess the effectiveness of government interventions in supporting small businesses.
2. to investigate the effect of COVID-19 on the cash flow of small businesses.
3. to assess the effect of COVID-19 on sales of small businesses and
4. to determine the effect of COVID-19 on the profitability of small businesses.

HISTORY OF CORONA VIRUS

Kumar, Malviya and Sharma (2020), opines that the debut incident of coronavirus was reported as cold in 1960, which led to about five hundred cases identified as Flu-like system and seventeen to eighteen of such cases were said to be infected with the strain of corona by polymerase chain. Kumar et al. (2020) point out that the virus spread to many countries such as Singapore, Thailand, Vietnam, Taiwan, United States of America and Hong Kong in 2003, which led to several cases of a severe acute respiratory syndrome caused by corona and more than 1000 patients were mortally reported in the same year. The year was tagged a black year for the microbiologist. However, in early 2020, after a December 2019 outbreak in China, the World Health Organization recognized SARS-CoV-2 as a new type of coronavirus which the outbreak quickly spread around the world (Kumar et al., 2020).

According to Stoppler (2020), coronavirus is a special type of common virus that infects humans, typically leading to an upper respiratory infection (URI.) Scientists have identified seven different types of human coronavirus.

Coronaviruses are zoonotic, meaning they are transmitted between animals and people (Department of Health, RSA, 2020). SARS-CoV-2 is a new strain of coronavirus that has not been previously identified in humans. COVID-19 was recognized as the cause of an outbreak of respiratory infection first discovered in Wuhan, China. The virus called COVID-19 has rapidly spread to the length and breadth of the world, however, with the aid of globalization, various government leaders swiftly took a pro-active measure to stall the spread of the virus to their territories following the institution of national lockdown to control the movement of people since humans are identified as the major carrier or medium of spreading the virus (Kumar et al., 2020).

SOUTH AFRICA'S NATIONAL LOCKDOWN

According to Tralac (2020), the South African President, Cyril Ramaphosa announced a national state of disaster in his first and second speech to the country regarding the Disaster Management Act. Hence, as posits by Tralac (2020), the President initiated a 21 days' national lockdown, outlined strict intervention in an all-inclusive arrangement to constrain transmission of the infection and to relieve its financial and social effect on 15th and 23rd March, respectively. He also declared that the government is taking "urgent and drastic measures to manage the disease, protect the people of our country and reduce the impact of the virus on our society and our economy". The lockdown initiated by the government was divided into alert levels that are summarized in table1.

TABLE 1
THE HIGHLIGHTS OF ALERT LEVELS OF THE NATIONAL LOCKDOWN IN SOUTH AFRICA

AL 5	AL 4	AL 3	AL 2	AL 1
AIMS				
"Drastic measures to contain the spread of the virus and save lives"	*"Extreme precautions to limit community transmission and outbreaks, while allowing some activity to resume"*	*"Restrictions on many activities, including at workplace and socially, to address a high risk of transmission"*	*"Physical distancing and restriction on leisure and social activities to prevent a resurgence of the virus"*	*"Most normal activity can resume, with precautions and health guidelines followed at all times"* *"Population prepared for an increase in alert levels if necessary"*

Source: The official tweeter handles of the president. (Presidency | South Africa@PresidencyZA)

While the President segments the response plan in three stages, the first stage started in mid-March when the coronavirus pandemic was announced as a national disaster. This incorporated an expansive scope of measures to alleviate the most noticeably awful impacts of the pandemic on organizations, on communities and people (The Presidency RSA, 2020). The measures included the release of disaster relief funds, tax relief, emergency procurement of essential goods and services, funding to small businesses and wage support through the Unemployment Insurance Fund (UIF) while the second stage of the monetary reaction was planned for balancing the economy and securing employments (The Presidency RSA, (2020). On 21st of April, the President declared that a social and monetary help bundle of R500 billion had been settled, adding up to around 10% of Gross Domestic Product (Tralac, 2020:SA Presidential address 2020).

The last stage is a financial system planned for driving the recuperation of the economy as the nation rises out of this pandemic. Key to the monetary recuperation system is the measures to market forces via interventions like economy reform implementation and building of infrastructures that will kindle all encompassing economic growth (Tralac, 2020). Moreover, there are different aids or relief plans initiated by the government of South Africa in addressing the impact of COVID-19 on small businesses. Thus, as posited by Lindiwe (2020), these grants or funds includes the following;

- Covid-19 SMME Emergency Funding Package and Giving for Hope
- Debt Relief Finance Scheme (DRFS)
- Motsepe Family Contribution.
- Resilience Facility/ Business Growth
- Mary Oppenheimer's donation
- Solidarity Fund
- Covid-19 Agricultural Disaster Support Fund
- The Sukuma Relief Programme
- South African Future Trust (SAFT)
- Employer/Employee Relief Scheme (TRS)
- Tourism Relief Funding
- MCEP Covid-19 Programme
- Essential Supplies Intervention Industrial Development Corporation (IDC) Covid-19
- Business financial relief measures for Old Mutual Insurers

RAYMOND MHLABA MUNICIPALITY

According to the Raymond Mhlaba municipality website (2020), the Municipality was named after the renowned anti-apartheid fighter, Raymond Mhlaba (generally known as Oom Ray). According to Eastern Cape Socio Economic Consultative Council (2017), the municipality was named in August through the merger of the disestablished Nxuba and Nkonkobe Municipalities with its significant towns being Alice, Bedford, Hogsback, Adelaide, Fort Beaufort, Seymour and Middle Drift. The Municipality is located along with the mountain scope of Winterberg (intaba zeNkonkobe). The ECECC (2017) further reiterates that Raymond Mhlaba is a countryside Municipality and the economy is to a great extent driven by the rural area, which incorporates citrus, ranger service and harvest creation. The citrus business is one of the region's biggest employers of labour. Also, the Municipality is notable for its rich legacy and culture. The momentous institutions of training available in the area are University of Fort Hare, Healdtown and Lovedale College. The travel industry area remains to a great extent underexploited in a district with notable assets as the Amathole Mountains and national heritage sites (Raymond Mhlaba municipality website, 2020).

SMALL SCALE BUSINESSES IN SOUTH AFRICA.

Ayandibu and Houghton (2017) points out that Small and medium businesses are those businesses which have fewer than 250 workers. The Banking Association of South Africa (2019) claims that the "National Small Business Act defined small and medium business as a very small and micro enterprises based on certain characteristics" while the National Small Business Amendment Act (26 of 2003) define businesses based on sizes, number of employees, turnover rates and total gross asset value. Notwithstanding, in March 2019 the Minister for Small Business and Development Lindiwe Zulu published a government gazette to adjust the definition of micro, small and medium enterprises in South Africa. Table 2 summarises the new definition of small businesses for the retail, motor, and repair services as well as the wholesale sector.

TABLE 2
THE NEW DEFINITION OF SMALL BUSINESS IN SOUTH AFRICA

Sector	"Size of class"	" no of paid workers"	" Total Annual Turnover"
"Retail and Motor Trade and Repair Services"	Medium	Fifty one to two hundred and fifty	Less than or equal to R80 Million
	Small	Eleven to fifty	Less than or equal to R25 million
	Micro	Zero to Ten	Less than or equal to 7.5 million
"Wholesale"	Medium	Fifty one to two hundred and fifty	Less than or equal to R220 Million
	Small	Eleven to fifty	Less than or equal to R80 million
	Micro	Zero to Ten	Less than or equal to 20 million

Source: Phillip de Wet (2019)

Oni and Fatoki (2013) opines that the SME area assumes a crucial job in making employments and generating wealth for the economy, SME's have been known as useful tools of all-inclusive financial economic development and improvement in South Africa and everywhere in the universe. A few researchers (Cant & Wiid, 2013; Peters & Naicker, 2013; SBP Alert, 2014) have anticipated that, in South Africa, SME's business constitutes 91% of official businesses, provides job to about 60% of the employable population and economic productivity amount to about 34% of GDP. While contributing fundamentally to the economy, SMEs cultivate broadening through their improvement of new and unsaturated parts of the economy. Likewise, creative and innovation based SME's give opportunities to the neighborhood, provincial and worldwide development, particularly in Brazil, Russia, India, China and South Africa (BRICS) economies (The Banking Association South Africa 2019).

CHALLENGES FACED BY THE SMALL BUSINESS DURING THE COVID-19 PANDEMIC

As the COVID-19 continues its disruption, it is no news that both small and bigger corporations are faced with the several challenges during the COVID-19 pandemic ranging from downsizing, lack of funds, break in supply chain etc. Bizimungu (2020) opined that at least 57.5 per cent of small and medium sized enterprises (SMEs) operating across different industries closed operations between March and April due to COVID-19 impact, also, a new study by Business Professionals Network (BPN) and the University of Rwanda in Bizimungu (2020) shows that sizeable numbers of the employee were disengaged from work with or without terminated benefits or packages due to the COVID- 19 national lockdown.

Besides, according to Facebook's survey in Chacon (2020), thirty-one percent (31%) of SMEs have shut down in the last 3 months. Although the sole business is worst hit as fifty-two percent (52%) are reported to be shut-down, while hotels, cafes, and restaurants account for forty-three percent (43%).Furthermore, services like wellness, grooming, fitness, or other professional services account for forty-one percent (41%). Among the reasons cited by business owners as to what caused their closure, a majority said it was necessary to obey the regulations by governments or health authorities, while a minority (9%) claimed it was due to financial constraints and seven percent (7%) cited the absence of client demand.

REVIEW OF EXTANT LITERATURE

Relationship Between Global Environment Disasters and Small and Medium Business Performances

Samantha (2017) studied the influence of natural disasters on Micro Small and Medium Enterprises (MSMEs) with a focus on the 2016 flood in Western Sri Lanka. Samantha (2017) argues that the "direct and indirect impacts of natural disasters are devastating to business activities and their continuity". The researchers randomly selected a hundred SMEs affected by flood from Colombo district while semi-organized meetings were carried out with the entrepreneurs to know their encounters on different kinds of harms, restoration and re-establishment. One of the significant discoveries was that smaller scale and SMEs are defenceless against flooding in four fronts: capital, labour, logistics and markets. Samantha (2017) further states that income have unexpectedly fallen beneath the consumptions and discovering labour was another significant issue as labourers are the quick casualties of the flood. Business experts needed to discover option or crisis management strategic that will work perfectly for their organizations as the flood has seriously harmed the open foundation framework. The author, however, recommends that the government have a duty to build a modernized industrial area and develop business development services.

Also, Asgary, Ozdemir and O¨ zyu¨rek (2020) researched how dangers are perceived by SMEs in a nation. Information was collected utilizing an online study of SMEs in Turkey. The outcomes show that worldwide economic hazards and geopolitical risks are the significant worry of SMEs.

Further in 2016, a review was carried out among SMEs in Malaysia to recognize the kind of tragedy and their effects, while Auzzira, Haighb and Amaratungab (2017) examined the effects of disaster on SMEs in Malaysia. The study was additionally used to recognize the issues for the SMEs in fighting against a catastrophic event. The aftereffects of the investigation show the effects of the cataclysmic event are extreme for SMEs in Malaysia and flood was recognized as the main natural tragedy among them. In light of the outcome, the authors recommended that the government or any approved body should assume more effective roles in managing cataclysmic events particularly in term of conveying data with the goal that all the influenced SMEs can take essential activities before the catastrophic event which may limit their misfortune.

METHODOLOGY

The research methodology utilized the interpretivism paradigm, an exploratory research design and a qualitative research approach. The interpretivism paradigm assisted to understand and explain the activities of small business owners during the COVID-19 period. This study adopted an exploratory research design because it supports data collected through qualitative data technique. The qualitative approach was utilized as it assisted to gain a better understanding of the effect of COVID-19 on small retail businesses. The population included small business retail owners and or managers in Alice Town located in the Raymond Mhlaba Local Municipality. Due to National lockdown levels restrictions, a purposive random sampling technique was utilized and eleven (11) respondents were interviewed. The interviews were conducted face to face while observing the COVID-19 social distancing protocol at their business premises. Both the interviewer and the interviewee strictly adhered to the rules by wearing masks and by using hand sanitizer. The data were collected from owners/managers of small businesses by means of an in-depth semi-structured interview whereafter it was analyzed using a thematic content analysis.

DISCUSSION

This section presents the data using the main themes. It focuses on understanding the effect of COVID-19 on small retail businesses in Alice Town, South Africa. Eleven respondents were interviewed whereby each interview ranged between 15 minutes and 45 minutes.

The effectiveness of government interventions in supporting small businesses

The first objective was to assess the effectiveness of government interventions fund in supporting small businesses during the national COVID-19 lockdown and the post lockdown season with a view to assist small business owners from the negative impact of the national lockdown on their businesses.

During the interview, it was discovered that only six (6) out of the eleven (11) respondents were aware of the intervention programmes instituted by the government. However, out of the six (6) retailers that were aware of the intervention funds, it was discovered that only two retailers have benefited from such funds. One of the beneficiaries said

"I am a proud beneficiary of the intervention fund provided by the government to both businesses and less privileged people. These funds have assisted me in catering for my upkeep i.e. paying both shop and residential rent, feeding, paying staff salaries, etc. I am very grateful to the government led by H.E Cyril Ramaphosa"

Another beneficiary said "if not for these funds I might probably be out of business. It's such a relief"

While on the other hand, a retailer believed that he was not helped probably because he is of a foreign national. It was obvious from the responses gathered from the interviewees portray that the intervention funds provided by the government have assisted business owners to pay their business bills which would have spell doom on such businesses. This is in line with the study of Asgary et al. (2020) which postulated that the worldwide financial dangers and international dangers are of significant worry to SMEs among the monetary and economic risks in key economies, while high basic joblessness or underemployment was seen as the most elevated dangers for the SME.

The effects of COVID-19 on small businesses cash flow

SMEs are playing a very crucial role in all stages of the economies, thus, plays a key function in wealth and job creation (Chowdhury, 2011; OECD, 2014; Chatterjee et al., 2015; Asgary et al., 2020). These businesses are open to danger and are not well equipped for any foreseen or unforeseen occurrence of disaster and environment risks (Crichton, 2006; Schaefer et al., 2011; Asgary et al., 2020). However, from the interview conducted, all the respondents stated that their cash flow was worst hit by the pandemic, and below are some of the views of the interviewee.

"Cash flow has decreased by 50% since the start of the pandemic" another interviewee has this to say concerning the effect of COVID-19 on her business; "…I noticed that some of my customers don't have the things they needed because they are not working during this national lockdown"

One hundred per cent (100%) of the business owners interviewed lamented to a significant decline in cash flow of their businesses.

The effects of COVID-19 on sales of small businesses

According to Hart (2020), sales encompasses all activities involved in selling a product or service to a consumer or business. While the Oxford college of marketing (2020), opines that sales assume an essential role in the creation and improvement of loyalty and trust among client and business. Trust and faithfulness are the fundamental reasons why a client would decide to endorse and recommend your organization to a companion or relative or compose an extraordinary review of your item or on the web or the internet. All the interviewees except one attest to the fact that COVID-19 has impacted negatively on their sale volume. Notable among these responses is a grocery store owner who stated that;

"We are witnessing a 50% decline on our sales since the advent of this national lockdown"

while only one (1) interviewee was indifferent on his sales volume. He described his sales volume as "normal" the COVID-19 has little or no effect on his business.

From the foregoing, it was discovered that COVID-19 has a dwindling effect on their sales. This is line with the study of Sigala (2020) on "Tourism and COVID-19", where the author asserts that tourism is experiencing a rapid and steep decline in demand (sales) during the COVID-19 pandemic.

Effects of COVID-19 on the profitability of small businesses

In many organizations, profit is the prize that the owners of the business need to accomplish from facing challenges and making ventures. Profit is the positive incomes and the backbone of an effective and significant business. If a business fails to achieve profit and instead suffers sustained losses, such businesses will struggle to survive (Tutor2u, 2020). Respondents were asked to narrate the effects of a COVID-19 pandemic on the running cost of their businesses and to state how it has affected their profitability. It was discovered that all the respondents except one opined that during the pandemic lockdown they incurred higher running cost and reduced profitability. Below are some of the words of Retailers around Alice metropolis.

"...expenses have remained stable while income has dropped by fifty per cent (50%). It has been a testing time for us. Since the start of the lockdown we have been running our business at a loss, that is more expenses than the income."

Another retailer responded as follows; "our profitability has dropped because there is a reduction on the inflow of customers to our outlets and this has caused more damage to the business than good"

While another interviewee opines that; "this pandemic has caused us to run our business at higher running cost because we have to purchase sanitizer at intervals, printing safety caution posters and purchase thermometer guns among others"

From the responses gathered, it was obvious that COVID-19 pandemic has negatively affected the sales of small business operators around Alice.

CONCLUSION

In conclusion, SME plays a significant role in the economy of many countries, including the Republic of South Africa. However, the SMEs are also exposed to various challenges, risks and unforeseen pandemic including the COVID-19 pandemic ravaging the world. Nevertheless, the outcomes of this study show the importance of addressing the effects of COVID-19 pandemic on SMEs performances in South Africa. The study sought to assess the effect of COVID-19 on small retail businesses in Alice Town, South Africa, with the following specific objectives; to assess the effectiveness of government interventions in supporting small businesses. Secondly, to investigate the effect of COVID-19 on the cash flow of small businesses. Thirdly, to assess the effect of COVID-19 on sales of small businesses. Lastly, to assess the effect of COVID-19 on the profitability of small businesses. Generally, this study established that COVID-19 has negatively affected the performance of small businesses in South Africa.

RECOMMENDATION

Recommendations from this study is divided under two headings: responsibilities from the government and small business owners.

Government:

This study recommends that for the small businesses to thrive during a pandemic or natural disaster, there is need for the government to foremost improve on the information dissemination strategy that will ensure that information relating to small business relief schemes in the country i.e as enumerated as above in section 4 under "South Africa's nation lockdown" gets to the end-users. Periodic messages should be sent to all mobile phone users on the available opportunities in the Republic.

Secondly, the government should ensure that the relief fund disbursement processes to the small business owners are transparent and seamless.

Lastly, small business owners should also ensure that they register with the government and follow her instruction whenever the need arises to ease the government burden of data collection.

Small business owners:

The need for accurate forecasting cannot be overemphasized, therefore, for any business to successfully thrive during this pandemic era, there is need to employ the service of a business in forecasting and extrapolating strategies that will help navigate the storming season. For example, business owners may attempt to expand their supply chain, put into consideration the option of working from home if applicable and need to cut down excessive expenses since there is a sharp drop in the organizational income. Furthermore, there is a need for small businesses to adopt innovative ways of doing business during and after the pandemic by using digital and online platforms.

There is a need for frequent evaluation and re-evaluation of the situation and a plan to deal with it, as the small business owners need to keep proper documentation of the happenings in both the inter and external environment of the business since no business can exist in a vacuum.

The employee needs to be properly motivated since a well-motivated or happy employee will lead to organizational citizenship and in-turn leads to organizational profitability and sustainability.

LIMITATION AND AREA FOR FUTURE PROSPECTS

This research recognizes a few limitations that call for critical consideration. To start with, a portion of the respondents demonstrated a negative demeanour behaviour towards the investigation because there is no money related gain for them. The assumptions from this investigation deserve further investigation in a bigger population using a larger sample size, comprising of more sectors and regions.

Thus, future examinations in different parts of the nation should be done with a more extensive range; it should be led as they set an exploration gap. Primarily, future research studies should be conducted in other sectors of the economy covering the whole nation with the exploration of different methodological techniques for example quantitative or mixed approach.

REFERENCES

Asgary A, Ozdemir A.L,O¨ zyu¨rek H (2020). Small and Medium Enterprises and Global Risks: Evidence from Manufacturing SMEs in Turkey. Int J Disaster Risk Sci (2020) 11:59–73

Auzzira Z, Haighb R, Amaratungab D (2017). Impacts of Disaster to SMEs in Malaysia. A conference paper presented at the 7th International Conference on Building Resilience; Using scientific knowledge to inform policy and practice in disaster risk reduction, ICBR2017, 27 – 29 November 2017, Bangkok, Thailand

Ayandibu A.O, Houghton J, (2017). The role of Small and Medium Scale Enterprise in local economic development (LED). Journal of Business and Retail Management Research (JBRMR), Vol. 11 Issue 2 J

Banking association of South Africa (2019). SME, https://www.banking.org.za/what-we-do/sme/#:~:text=Small%20and%20Medium%20Enterprises%20(SME's,Africa%20and%20around%20the%20world.&text=While%20contributing%20significantly%20to%20the,unsaturated%20sectors%20of%20the%20economy.

Bizimungu J (2020). Study: 57 per cent of SMEs affected by Covid-19 lockdown. The New Times. https://www.newtimes.co.rw/news/study-57-cent-smes-affected-covid-19-lockdown

Business encyclopedia (2020). Small Business. https://www.shopify.co.za/encyclopedia/small-business

Cant M. and Wiid J (2013). Establishing The Challenges Affecting South African SMEs. International Business & Economics Research Journal. Vol. 12(6).

Chacon B (2020). 6 Small Business Challenges During COVID-19 (+ How to Overcome Them). Ecommerce, Instagram. https://later.com/blog/small-businesses-challenges/

Chatterjee, R., K. Shiwaku, R.D. Gupta, G. Nakano, and R. Shaw. 2015. Bangkok to Sendai and beyond: Implications for disaster risk reduction in Asia. International Journal of Disaster Risk Science 6(2): 177–188.

Chowdhury, S.R. 2011. Impact of global crisis on small and medium enterprises. Global Business Review 12(3): 377–399. Crichton,

D. 2006. Climate change and its effects on small businesses in the UK. London: AXA Insurance UK.

ECSCC (2017). Raymond Mhlaba Local Municipality Socio Economic Review and Outlook, 2017. https://www.ecsecc.org/documentrepository/informationcentre/raymond-local-municipality_12336.pdf

Goitom H (2020). South Africa Government Measures to Contain the Spread of COVID-19 and Mitigate Damages. Library of Congress. https://blogs.loc.gov/law/2020/04/south-africa-government-measures-to-contain-the-spread-of-covid-19-and-mitigate-damages/

Hart M (2020). What Is Sales? A Quick Guide. Hubspot. https://blog.hubspot.com/sales/what-is-sales

Kalidas S, Magwentshu N, and Rajagopaul A (2020). How South African SMEs can survive and thrive post COVID-19. McKinsey & company

Kumar D, Malviya R, Kumar Sharma P. Corona Virus: A Review of COVID-19. EJMO 2020;4(1):8–25.

Lindiwe K (2020). The impact of Covid-19 on small and micro businesses in SA. Entrepreneurship opinion South Africa. https://www.bizcommunity.com/Article/196/836/203706.html

Monson C (2020). What Small Businesses Need to Survive the Coronavirus Crisis. Harvard Business School. https://hbr.org/2020/03/what-small-businesses-need-to-survive-the-coronavirus-crisis

OECD (Organisation for Economic Co-operation and Development). 2014. Financing SMEs and entrepreneurs 2014: An OECD

OECD(2020). Coronavirus (COVID-19): SME Policy Responses. Tackling Coronavirus (COVID-19) contributing to Global effort. http://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/

Oni O. and Fatoki O (2013). Customer Satisfaction and Loyalty to Small Township Retail Stores in Mankweng, Limpopo Province, South Africa. Journal of Economics. Vol 4(2).

Peters R and Naicker V (2013). Small medium micro enterprise business goals and government support:A South African case study. South African Journal of Business Management. Vol.44(4) 13

Phillip de Wet (2019). The definitions of micro, small, and medium businesses have just been radically overhauled – here's how. Business Insider South Africa. https://www.businessinsider.co.za/micro-small-and-medium-business-definition- update-by-sector-2019-3

Raymond Mhlaba Municipality website. https://www.raymondmhlaba.gov.za/about_us

Samantha G (2017). The Impact of Natural Disasters on Micro, Small and Medium Enterprises (MSMEs): A Case Study on 2016 Flood Event in Western Sri Lanka. A conference paper presented at the 7th International Conference on Building Resilience; Using scientific knowledge to inform policy and practice in disaster risk reduction, ICBR2017, 27 – 29 November 2017, Bangkok, Thailand

SBP Alert (2014). Examining The Challenges Facing Small Businesses in South Africa. An SBP occasional paper.Vol.1(1). http://smegrowthindex.co.za/wp-content/uploads/2014/11/alert-10.14_print-no-bleed.pdf

Schaefer, A., S. Williams, and R. Blundel. 2011. SMEs' construction of climate change risks: The role of networks and values. In Proceedings of International Conference on SMEs: Moving Towards Sustainable Development, 20–22 October 2011, Montreal, Canada. 1–18

scoreboard. Paris: OECD Publishing.

Sigala M (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2020.06.015

The Pesidency RSA (2020). The Presidncy Republic of South Africa. http://www.thepresidency.gov.za/speeches/address- president-cyril-ramaphosa-south-africa%E2%80%99s-response-coronavirus-pandemic%2C-union-buildings%2C- tshwane-4

Tralac (2020). South Africa's policy response to the COVID-19 pandemic, https://www.tralac.org/news/article/14617-south-africa-s-policy-response-to-the-covid-19-pandemic.html

Tutor2u (2020). Study Notes on Measurement & Importance of Profit. https://www.tutor2u.net/business/reference/measurement-importance-of-profit

United Nation Development Programme (2020), COVID-19 pandemic Humanity needs leadership and solidarity to defeat the coronavirus. https://www.undp.org/content/undp/en/home/coronavirus.html

WebMD (2020). Symptoms of Coronavirus. https://www.webmd.com/lung/covid-19-symptoms#1

Employee engagement and performance: A study of South African retail organisations circa COVID-19

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ABSTRACT

Employee engagement is the practice of emotionally and physically engaging employees of organisations in order to derive greater organisational outcomes. More engaged employees lead to more satisfied customers, which eventually results in organisational success. Therefore, the primary objective of the study is to investigate employee engagement practices and empirically test the concept with the constructs suggested by the Temkin Group research. A quantitative research method was applied with a survey technique of data collection. A total of 253 valid cases were analysed in SPSS and SmartPLS software packages. The findings indicated that all the constructs used in this study (e.g. inform, inspire, instruct, involve, and incentivise) were found to be reliable and valid enough to develop an overall employee engagement concept. In addition, the practices were significantly related to the employee engagement concept. Employee engagement has the highest relationship with involved practice (β=0.901) compared to other practices. The mean value of inspire practice was the highest (2.9644) and incentivise practice had the lowest mean score (2.5534). Overall, the study contributed to the existing literature in employee engagement. The findings have implications for human resource managers, marketers and related decision-makers.

Keywords: employee engagement; performance; South African; retail organisations

INTRODUCTION

Employee engagement has generated much interest among academics and practitioners alike. When employees are aware of the context of a business, organisations are benefitting from the improved performance of employees (Barik & Kochar, 2017). According to Markos & Sridevi (2010), organisations have to build a two-way relationship between employer and employee, which is a requirement of engagement. Growing sophisticated technologies require more employees with increased technical and professional skills (Markos & Sridevi, 2010). These employees with increased technical and professional skills should be managed carefully. In other words, they should not be managed in a totalitarian management style, or old styles of management (Markos & Sridevi, 2010). This fact is further enhanced by the COVID-19 pandemic that placed an extra burden on management and staff alike to overcome the challenges as posed by the pandemic. According to Shukla et al. (2015), “employee engagement is the extent to which employees put discretionary effort into their work, in the form of extra time, mental ability, passion and energy”. Pleasant customer experiences and greater business outcomes are generated by engaging the employees properly (Lucas & Temkin, 2012). In times of crisis such as during the COVID-19 pandemic, these engagements have become more and more important and relevant to organisations. According to Lucas & Temkin (2012), employee engagement is a neglected field in spite of its convincing positive effects. So, employees need to be engaged and empowered to achieve proper organisational outcomes. A more efficient and productive workforce can be created by engaging employees, specifically during times such as the 2020 COVID-19 pandemic where it has become more and more important to have employees engaged in all activities of the organisation and to render better customer service. Many of these services moved from face to face to remote. Any initiatives of improvement related to the organisation will be in vain in the absence of employee involvement and engagement (Markos & Sridevi, 2010). Several studies have found that employee engagement is a key predictor of outcomes such as employee satisfaction, productivity, improved employee turnover (Barik & Kochar, 2017), performance and morale (Bailey et al., 2017), and customer service. Therefore, it is essential to conduct more empirical research to validate the employee engagement construct and its relationship with various outcomes.

The overall purpose of this research is to statistically validate the employee engagement construct and propose a conceptual framework for future study related to the impact of employee engagement on performance and its benefit in crisis situations such as the COVID-19 pandemic. The specific objectives of the study include investigating the extent to which inform, inspire, instruct, involve, and incentivise are related to the employee engagement construct.

The study has been organised into different sectionsnamely literature review followed by research methodology and data analysis techniques; findings; discussion of the results; conclusion, and limitations and guidelines for further study.

LITERATURE REVIEW

Several past studies related to employee engagement, organisational performance, and the resultant financial outcome were reviewed (Saks, 2006; Markos & Sridevi, 2010; Gruman & Saks, 2011; Lucas & Temkin, 2012; Temkin & Lucas, 2013).

Barik and Kochar (2017) explored several key factors such as a reward system, job enrichment, effective leadership, the scope of advancement and self-development, employment security, self-managed teams and decision-making authority driving employee engagement. In addition, employee engagement results in outcomes such as increased productivity, profitability and lower employee turnover.

Bailey et al. (2017) explored evidence that ensures organisational performance and individual well-being through a higher level of engagement. A systematic review of 214 studies reveals that psychological state of mind, job design, leadership, organisational and team factors, and organisational interventions are the main antecedents of engagement. In addition, engagement was found to be positively related to several outcomes, including individual morale, task performance, extra-role performance and organisational performance (Bailey et al., 2017).

Saks (2006) conducted a study to detect the antecedents and consequences of employee engagement. The antecedents of employee engagement detected in the study were job characteristics, perceived organisational support, perceived supervisor support, rewards and recognition, procedural justice and distributive justice. However, the results indicated that job characteristics, perceived organisational support, and procedural justice were statistically the most significant antecedents of employee engagement. The consequences of employee engagement identified in the study were job satisfaction, organisational commitment, low intention to quit, and organisational citizenship behaviour. The findings indicated that job satisfaction, organisational commitment, low intention to quit, and organisational citizenship behaviour were most significantly influenced by employee engagement.

According to Markos & Sridevi (2010), one of the strongest predictors of positive organisational performance is employee engagement, which is built on the foundation of earlier concepts like job satisfaction, employee commitment and organisational citizenship behaviour. In addition, employees who are engaged feel emotional attachment and involvement with their organisation and job respectively.

Gruman & Saks (2011) described a greater emphasis on performance management systems by the current organisation. The findings indicated that the performance management system is a way of producing higher levels of job performance and generating increased performance.

This study has taken the research of the Temkin Group as a conceptual foundation and empirical analysis (Lucas & Temkin, 2012; Temkin & Lucas, 2013). The Temkin Group has conducted research to unearth the best practices termed the “Five Is of Employee Engagement” (i.e. inform, inspire, instruct, involve, and incent).

- Inform – Employees need to be aware of the vision and brand values of the company, understand these issues, as well as have an understanding of the feelings of customers towards the company and its brands.

- Inspire – Employees must have a sense of belonging and feel part of the organisation's vision and values. This will help them believe that they are important and are valued so they can have pride in what they do and in the company.
- Instruct – Employees must receive assistance by various means to meet the expectations on the brand promises to customers. This can be in various forms such as coaching, discussions and focused training.
- Involve – Based on feedback received from employees and customers alike, employees should redesign and restructure job descriptions, adapting and enhancing work processes, and look at problem solving methods.
- Incent – Employees generally are in favour of incentives that are based on the objective evaluation of their efforts, the allocation of appropriate rewards for their efforts, and positive reinforcement for desired employee behaviour in order to motivate employees to continue striving to do their best.

Lucas & Temkin (2012) also emphasised support from other functional departments within the organisation for a successful employee engagement programme. In addition, they identified some areas for collaborating between customer experience and human resources (Lucas & Temkin, 2012). Another study (Temkin & Lucas, 2013) by the Temkin Group, conducted with more than 2 400 US employees, came up with some interesting findings. Companies with greater engaged employees outperform their competitors in various aspects such as financial performance and customer experience. The reasons for this outperformance are highly engaged employees working harder. Retail organisations have less engaged employees. On the other hand, organisations in the services industries have the highest number of engaged employees. The study also found that those employees who are constantly engaged with customers, high-income earners, male, and African-American personnel are highly engaged employees. A successful employee engagement programme produces engaged employees who are a valuable asset to organisations (Temkin & Lucas, 2013).

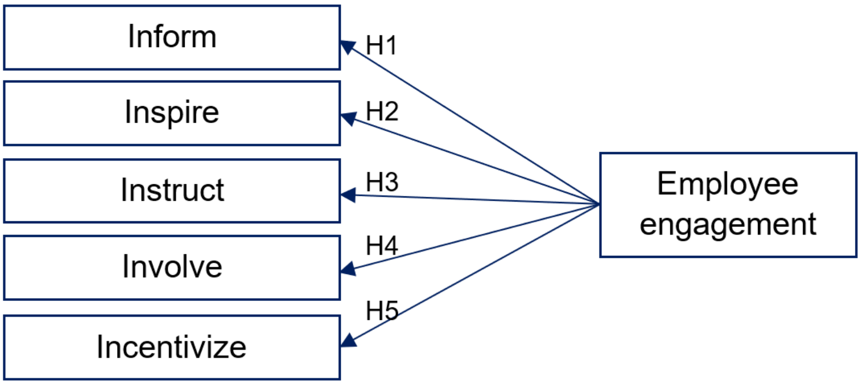
CONCEPTUAL FRAMEWORK

Based on the study of the Temkin Group's best practices, the conceptual model for this study was proposed (Lucas & Temkin, 2012; Temkin & Lucas, 2013).

From the above discussion, five hypotheses (H1 to H5) were formulated.

- H_1: Employee engagement practice "Inform" is significantly related to "Employee engagement".
- H_2: Employee engagement practice "Inspire" is significantly related to "Employee engagement".
- H_3: Employee engagement practice "Instruct" is significantly related to "Employee engagement".
- H_4: Employee engagement practice "Involve" is significantly related to "Employee engagement".
- H_5: Employee engagement practice "Incentivise" is significantly related to "Employee engagement".

FIGURE 1
CONCEPTUAL FRAMEWORK



METHODOLOGY

Research methodology delineates a systematic process by which research will be conducted and where approach, sampling design, instrument design, data collection and statistical techniques for data analysis are used to fit the needs of the research (Akter, 2015). This section will focus on the sampling process and data collection, followed by measurement instruments and plan for data analyses.

Sampling design and data collection

Malhotra (2010) defines a sample as a subset of the population selected for participating in the study, where the sample characteristics called statistics are used to predict the population parameters through estimation and hypothesis testing. Retail organisations in South Africa were considered as the population and a total of 278 responses were collected through a structured questionnaire. The respondents were owners and employees from different levels in retail organisations. A quantitative research design was followed to conduct the study. Due to cost and time considerations, a non-probability convenience sampling technique was utilised. The guidelines of Hair et al. (2019) were followed in determining sample sizes. After collecting the data, initial screening showed some missing values, which were discarded and 253 responses were retained for statistical analyses.

Measurement instrument

The questionnaire consisted of two parts. First of all, some information related to demographic characteristics (e.g. gender, age, rank or position in the organisation, job function, number of employees, and age of the organisation) of the respondents were requested. The second part included the measured variables of this study. A 20-item Employee Engagement Survey Questionnaire was used, where each respondent was required to rate their opinion on a five-point Likert-scale ranging from 1 – “Never” to 5 – “Always”. The items were developed by reviewing the pertinent literature related to employee engagement (Lucas & Temkin, 2012; Temkin & Lucas, 2013). The latent constructs and their measured items are shown in table 1.

TABLE 1
CONSTRUCTS AND MEASURED VARIABLES

Construct	Code	Items
Inform (INFO)	INFO1	The company uses a formal customer experience plan identifying key topics, audience segments, delivery channels, and frequency.
	INFO2	Internal customer experience communications are tailored to specific job roles.
	INFO3	Employees across the organisation are provided easy access to feedback from customers.
	INFO4	Leaders across the organisation regularly discuss customer experience in their communications.
Inspire (INSP)	INSP1	The company has a clear set of values, which guides decision-making across the organisation.
	INSP2	Executives meet with employees on different levels across the organisation.
	INSP3	Stories about employees helping customers are retold to reinforce company values.
	INSP4	The company provides resources for employees to participate in volunteer causes.
Instruct (INST)	INST1	Customer experience training is embedded in orientation sessions for newly hired employees.
	INST2	All managers are trained to develop their skills in reinforcing the company’s values with their employees.
	INST3	Managers coach employees on customer-centric behaviour and practices.
	INST4	Employees across the organisation are recruited to teach customer experience behaviour and practices to fellow employees.
Involve (INVO)	INVO1	Employee feedback is actively solicited and formally acted upon.
	INVO2	The organisation communicates the actions it takes based on employee feedback.
	INVO3	The organisation facilitates employee interactions across functional teams to raise awareness and increase collaboration.
	INVO4	The organisation uses a defined network of employees as ambassadors of its customer experience efforts.
Incentivise (INCE)	INCE1	The organisation has formal incentives for reinforcing good customer-centric behaviours and results.
	INCE2	Managers are evaluated based on the engagement levels of their employees.
	INCE3	The organisation has a formal peer-to-peer recognition programme.
	INCE4	Teams that demonstrate customer experience excellence are publicly celebrated.

Data analysis

Data collected through questionnaires were analysed using the SPSS and SmartPLS software tool version 21 and 3 respectively. The analysis started with demographic profiling of the respondents followed by descriptive statistics (e.g. mean, standard deviation, skewness and kurtosis), model validation and reliability through confirmatory factor analysis and partial least square structural equation modelling (PLS-SEM).

FINDINGS

Demographic analysis

First of all, the analyses began with demographic profiling of the samples. The frequency distribution and percentile of ranking or title category indicate that the maximum number of responses came from managers (55.7%). Next, the analyses showed that the highest number of responses have come from operation departments (31.6%). The range of highest frequency in the number of employees is more than 200 (40.3%), which indicates significant participation of the large organisations in this survey. The male and female ratio is 60.9%:39.1%. The age range “35-44” has the highest frequency (45.1%), followed by “25-34” (34.0%). The age of organisation data indicates that more than half of the organisations have an age of more than 25 years (50.2%).

TABLE 2
DEMOGRAPHIC BREAKDOWN OF RESPONDENTS

Category	Subcategory	Frequency	Percent (%)
Ranking or title	CEO,VP, Director	1	.4
	Business Owner	1	.4
	Senior Management	40	15.8
	General Management	37	14.6
	Manager	141	55.7
	Staff	32	12.6
Function or department	Product development	7	2.8
	Finance	20	7.9
	Logistics/ supply chain	9	3.6
	Pricing	4	1.6
	Operations	80	31.6
	Marketing	27	10.7
	Merchandise management	7	2.8
	Information Technology	23	9.1
	E-channel and digital operations	2	.8
	Human Resources	8	3.2
	Other	60	23.7
Number of employees	<10	41	16.2
	11 - 25	46	18.2
	26 - 50	22	8.7
	51-100	19	7.5
	101 - 200	20	7.9
	>200	102	40.3
Gender	Male	154	60.9
	Female	99	39.1
Age	18-24	2	.8
	25-34	86	34.0
	35-44	114	45.1
	45-54	47	18.6
	55-64	4	1.6
Age of organization	1-5	39	15.4
	6-10	45	17.8
	11-15	24	9.5
	16-20	6	2.4
	21-25	8	3.2
	25+	127	50.2

Descriptive analysis

The descriptive analysis includes mean, standard deviation, skewness and kurtosis values. Mean or average value, a measure of central tendency, is popularly used to indicate the centre of distribution (Malhotra, 2010). In addition, the standard deviation is used to see how the data have deviated from the mean. (Malhotra, 2010). Kurtosis and skewness are generally used to delineate the shape of the distribution (Hair et al., 2019). As the constructs consist of multiple items, a composite or mean score was calculated for each construct by averaging all the items of the respective construct. For example, INFO1, INFO2, INFO3 and INFO4 were summed and divided by 4 to calculate inform construct. Mean value analyses indicate that inspire has the highest mean value (2.9644) followed by inform (2.7101) and instruct (2.7032). On the other hand, incentivise has the lowest mean value (2.5534), followed by the second lowest mean of involve (2.5567).

TABLE 3
DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	Skewness	Kurtosis
INFORM	2.7101	.98457	.495	-.455
INSPIRE	2.9644	.85771	.185	-.147
INTRUCT	2.7032	1.09518	.561	-.583
INVOLVE	2.5567	.96906	.486	-.244
INCENTIVISE	2.5534	1.00130	.488	-.265

Partial least squares structural equation modelling (PLS-SEM)

For validating the constructs and the proposed model, the partial least squares structural equation modelling (PLS-SEM) approach has been utilised. According to Hair et al. (2019), PLS-SEM is often termed variance-based SEM, which analyses the total variance including both measurement and structural model. As far as confirmatory factor analysis (CFA) is concerned, the measurement model involves the identification of each observed variable's contribution to the respective construct along with the reliability and validity of the model. In the next stage, the structural model analysis is performed with a valid and reliable measurement model. The distinguishing features between PLS-SEM and covariance-based SEM (CB-SEM) indicate that prediction and explanation of the relationships are primarily focused by variance-based SEM. On the other hand, confirmation of well-established theory is emphasised by covariance-based SEM (Hair et al., 2019). As the study purpose is to develop and propose a research model, variance-based SEM is more suitable.

Scale reliability and validity

The following table contains a summary of measurement model analysis. It includes factor loadings, composite reliability (CR), average variance extracted (AVE) and Cronbach's alpha values. According to Hair et al. (2019), "Cronbach's alpha, the measure of reliability that ranges from 0 to 1, with values of .60 to .70 deemed the lower limit of acceptability." As illustrated in the following table, all the values ranging from 0.884 to 0.709 fall within the acceptable limit. It also suggests that the constructs used in the research are reliable for further analyses. A minimum indicator loading is .708, which represents around 50% of the indicator's variance. The CR and AVE for each construct should be at least 0.70 and 0.50 respectively (Hair et al., 2019). As illustrated in the following table, all the values of factor loadings, CR and AVE fall within the acceptable level.

Assessment of discriminant validity

Discriminant validity is used to determine whether a construct is distinctive from other constructs (Hair et al., 2019). Discriminant validity is achieved by comparing the shared variance within (AVE) and between constructs and the square root of AVE must exceed inter-construct correlations. The following table indicates the discriminant validity of the model as all the square root values of AVE presented diagonally are greater than inter-item correlations presented off the diagonal.

TABLE 4
MEASUREMENT MODEL SUMMARY

	Incentivise practice	Inform practice	Inspire practice	Instruct practice	Involve practice
INCE1	0.817				
INCE2	0.788				
INCE3	0.743				
INCE4	0.821				
INFO1		0.774			
INFO2		0.805			
INFO3		0.844			
INFO4		0.836			
INSP1			0.714		
INSP2			0.738		
INSP3			0.760		
INSP4			0.707		
INST1				0.855	
INST2				0.845	
INST3				0.888	
INST4				0.856	
INVO1					0.821
INVO2					0.852
INVO3					0.884
INVO4					0.857
CR	0.871	0.888	0.82	0.92	0.915
AVE	0.629	0.665	0.533	0.742	0.729
Cronbach's Alpha	0.804	0.832	0.709	0.884	0.876

TABLE 5
RESULTS OF DISCRIMINANT VALIDITY

	Incentivise practice	Inform practice	Inspire practice	Instruct practice	Involve practice
Incentivise practice	0.793*				
Inform practice	0.625	0.815*			
Inspire practice	0.696	0.654	0.730*		
Instruct practice	0.570	0.743	0.535	0.861*	
Involve practice	0.725	0.720	0.712	0.666	0.854*

*All the diagonal elements are the square root of AVE and the off-diagonal elements are correlations among the constructs.

Structural model analysis

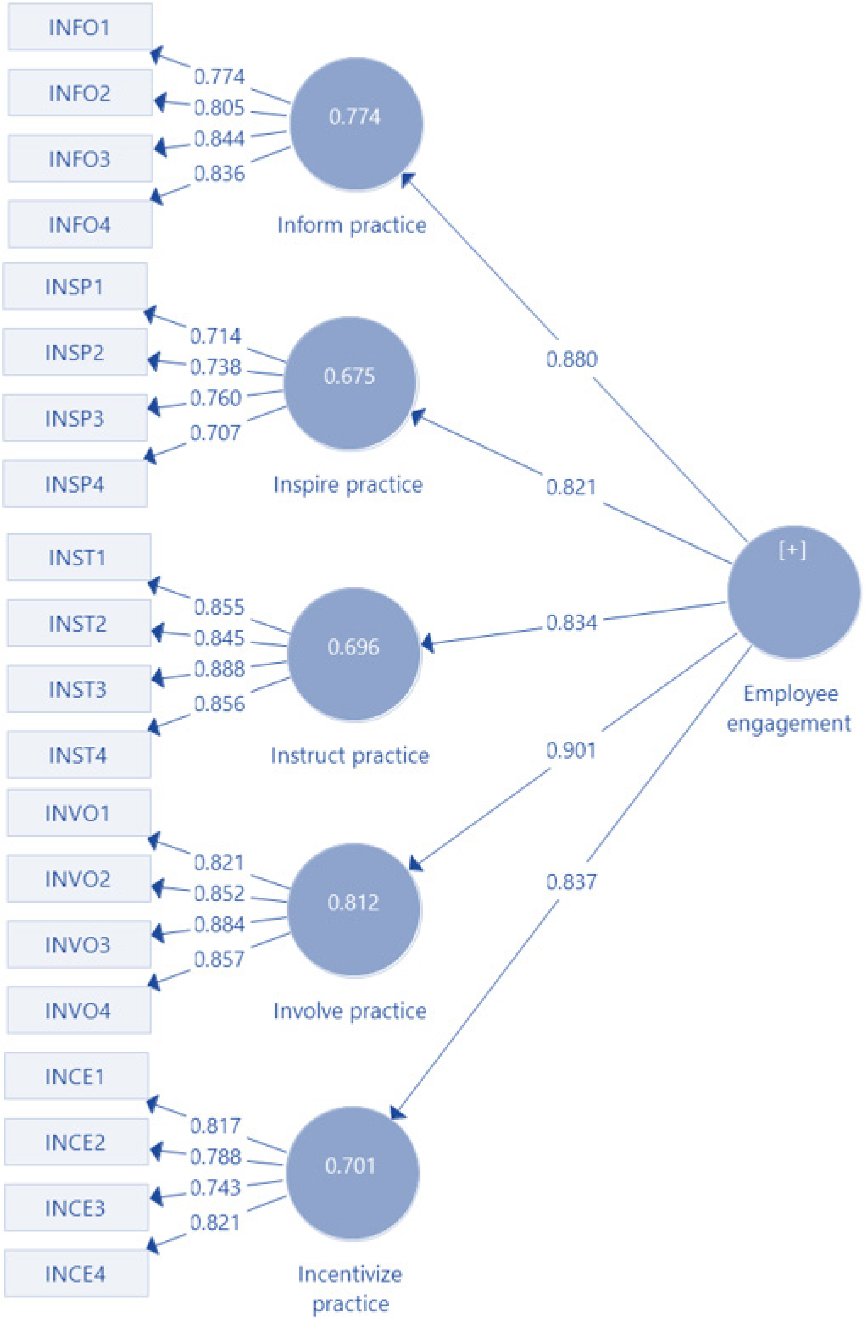


Table 6 shows the paths, path coefficients (β), t values, p values and impact of the path coefficients. The results indicated that all of the employee engagement practices (incentivise practice, inform practice, inspire practice, instruct practice, involve practice) are significantly related to employee engagement construct, which is a higher-order construct created by taking into account all the 20 indicators of the study. According to Hair et al. (2019), “Higher-order models are comprised of a single higher-order construct (HOCs) that represents the overall concept.” Therefore, all the proposed hypotheses (H1 to H5) were supported. The largest path coefficient of involve practice (β=0.901) indicates that when employee engagement score increases by one standard deviation unit, the involve practice score will increase by 0.901 standard deviation units, assuming all other independent constructs remain constant. As shown in the box of the construct in figure 2, the R2 value of 0.812 also suggests the strongest predicting power of employee engagement on involve practice. The R2 value of 0.812 indicates that around 81.2% variance in involve practice is due to employee engagement.

TABLE 6
STRUCTURAL MODEL ANALYSIS RESULTS

Paths	Path coefficients (β)	T statistics	P values	Result
Employee engagement -> Incentivise practice	0.837	38.063	0.000*	Significant
Employee engagement -> Inform practice	0.880	53.173	0.000*	Significant
Employee engagement -> Inspire practice	0.821	34.720	0.000*	Significant
Employee engagement -> Instruct practice	0.834	32.844	0.000*	Significant
Employee engagement -> Involve practice	0.901	66.425	0.000*	Significant

Note: *p<0.05, based on two-tailed test; t=1.96.

DISCUSSION

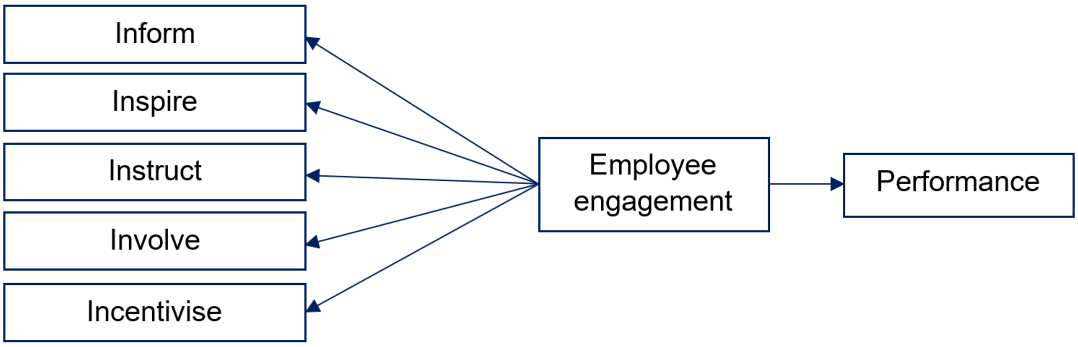
The overall objective of the study was to statistically validate the employee engagement construct and propose a conceptual framework for future study related to the impact of employee engagement on performance. A total of 253 cases were quantitatively analysed using SPSS and SmartPLS software packages. All the constructs used in this study (e.g. inform, inspire, instruct, involve, and incentivise) were found to be reliable and sufficiently valid to develop an overall employee engagement concept. The results of structural equation modelling showed that employee engagement is significantly related to each of the five constructs: inform, inspire, instruct, involve, and incentivise. Further breakdown of the results suggest that employee engagement has the highest relationship with involve practice (β=0.901) followed by inform practice (β=0.880), incentivise practice (β=0.837), instruct practice (β=0.834), and inspire practice (β=0.821). The mean value analyses showed that inspire practice has the highest mean (2.9644). On the other hand, incentivise practice has the lowest mean score (2.5534). Therefore, the retail organisations should improve their employee engagement practices, especially incentivise practice. Formal incentive programmes, recognising and celebrating employee performance should be introduced to improve in incentivise practice. As the employee engagement programmes are low among the organisations surveyed, more improvement is required in this regard. Past studies also emphasised employee engagement practices that significantly lead to greater organisational and individual performance (Bailey et al., 2017; Saks, 2006).

The results obtained from this study were compared with past studies that are relevant (Lucas & Temkin, 2012; Temkin & Lucas, 2013). The Temkin Group also conducted research on different practices of employee engagement. They found that, overall, organisations lack engaged employees (Lucas & Temkin, 2012). This finding is almost in line with the current study as overall mean values of practices of employee engagement are below 3, which is fairly low. They also have investigated that services industries have the most engaged employees while the retail sector has the fewest (Temkin & Lucas, 2013). This study also suggests similarity as the current study was conducted on the retail industry of South Africa. As the full model is found to be valid and reliable with partial least square structural equation modelling (PLS-SEM) analysis, a new conceptual model has been suggested in the next section for future research based on the Five Is of Employee Engagement suggested by the Temkin Group. It has got implications for human resource managers, marketers and related decision-makers. It also has contributed to past studies related to employee engagements and its antecedent and outcomes (Saks, 2006; Barik & Kochar, 2017).

CONCLUSION AND FURTHER STUDY

The study investigated employee engagement levels and practices in retail organisations in South Arica. The findings reveal that all the sub-elements of employee engagement are significantly related to employee engagement. Overall, the proposed model has validity and reliability and all the hypotheses were supported in statistical analyses. However, the study has some limitations. First, it utilised a non-probability sampling process, which is less generalisable than a probability sampling. Second, the study does not include any consequence variables of employee engagement such as organisational performance. Lucas and Temkin (2012) noted that engaged employees try harder than disengaged employees for organisational success. Research conducted by Saks (2006), Markos and Sridevi (2010), and Gruman & Saks (2011) suggests that employee engagement leads to better work performance. However, no studies were found that have tested the impact of employee engagement including inform, inspire, instruct, involve and incent on performance through structural equation modelling. Therefore, a new model has been proposed for future study.

FIGURE 3
PROPOSED MODEL FOR FURTHER STUDY



The current study investigated the construct validity of the Employee Engagement Survey Questionnaire within the South African context. The study was found to be a good fit for the hypothesised model and confirmed the five-factor model in terms of the underlying dimensionality of the instrument. The findings thus suggest that the Employee Engagement Survey Questionnaire could be used effectively within the South African retail context.

ACKNOWLEDGEMENTS

I thank Mr S Hassan for his statistical assistance and guidance.

English language editing services supplied by Directorate: Language Services at UNISA.

REFERENCES

Akter, N. 2015. Modelling intention to use third party logistics: an application of the theory of planned behaviour. PhD thesis. RMIT University. Australia.

Bailey, C., Madden, A., Alfes, K. & Fletcher, L. 2017. The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. International Journal of Management Reviews, 19(1), 31-53.

Barik, S. & Kochar, A. 2017. Antecedents and consequences of employee engagement: A literature review. International Journal of Latest Technology in Engineering, Management & Applied Science, 6(4), 33-38.

Gruman, J. A. & Saks, A. M. 2011. Performance management and employee engagement. Human resource management review, 21(2), 123-136.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. 2019. Multivariate data analysis: A global perspective (8th edition). Cengage Learning EMEA - United Kingdom.

Lucas, A. & Temkin, B. 2012. The Five Is of Employee Engagement. Temkin Group Insight Report. United States. Available at: www.temkingroup.com [Accessed 20 May 2020]

Malhotra, N. K. 2010. Marketing research: An applied orientation (6th edition). New Jersey: Prentice Hall.

Markos, S. & Sridevi, M. S. 2010. Employee engagement: The key to improving performance. International journal of business and management, 5(12), 89.

Saks, A. M. (2006). Antecedents and consequences of employee engagement. Journal of managerial psychology, 21(7), 600-619

Shukla, S., Adhikari, B. & Singh, V. 2015. Employee engagement-role of demographic variables and personality factors. Amity global HRM review, 5, 65-73.

Temkin, B. & Lucas, A. 2013. Employee Engagement Benchmark Study. Temkin Group

German and South African millennials' reactions to fear and stress when purchasing products during COVID-19

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ABSTRACT

COVID-19 was a sudden and unexpected pandemic that upset the very foundations of human existence world-wide. Both Germany and South Africa felt devastating impacts during COVID-19 in the business sector. The effects of COVID-19 on millennials' behaviour patterns is of importance. This paper will shed more light on the impact of fear and stress during COVID-19 on millennials' purchases of certain products. The study employed an online survey. The sample included millennials who had internet access, born during 1980-2002 from SA and Germany. Non-probability convenience sampling was employed in the study. Germany had 949 and South Africa, 676 respondents. Thus, totalling a convenience quota sample of 1625. Corona specific personality traits registered different results. The study results revealed that the fear dimension was much higher in South Africa than in Germany. Fear also had a high influence on the buying behaviour of different products groups like groceries, toiletries, personnel protective equipment and alcohol– with high differences registering between Germany and South Africa during the different COVID 19 specific restrictions.

Keywords: Consumer behaviour, COVID-19, Food, Millennials, PPEs

INTRODUCTION

COVID-19 is one of the greatest humanitarian pandemics registered under disaster management by many countries in the world. COVID-19 has caused customers to display fear, stress, anxiety and mass panic. There has been mass buying of food, medical supplies, toilet paper, hand gloves, hand sanitisers and face masks worldwide. To manage COVID-19, many governments worldwide were forced to take a variety of drastic measures. Due to COVID-19, and the rising rate of infection in South Africa (SA), the government declared a National State of Disaster on the 15 March 2020 and lockdown came into effect on the 23 March 2020. During this time, many stores and businesses in South Africa shut down. People stayed at home, and only essential workers were allowed to work. Germany did not have a strict lockdown like South Africa. There was, for example, no general curfew (Robert Koch Institute. 2020:1-10). The rationale and justification for the researchers choosing these two countries is that Germany is a developed country and South Africa an emerging nation. The contrast in their economies creates different implications for purchasing behaviour. The study will shed light on the millennial segment, where there is limited information in the literature. It will further investigate the impact of stress and fear and how it influences German and SA consumer behaviour during the pandemic.

Objective and purpose of the study

Personality traits are essential factors used to unpack why millennials purchase a product during COVID-19. An emotion like fear or stress is a strong personality trait that has a bearing on the purchasing patterns and behaviour of millennials during COVID-19. Therefore, the main objective of the study is to analyse the impact of fear and stress during COVID-19 on millennials in Germany and South Africa and report on how this influences their purchases of consumer/household products such as PPEs, toiletries, groceries and alcoholic beverages.

Millennials in SA and Germany occupy a large market segment involved in the purchasing of products and services, and the purpose of this study is to provide companies with information on how to market products to millennials during a pandemic.

LITERATURE REVIEW AND DEVELOPING HYPOTHESES

The literature review will shed more light on important themes. These themes assist in the development of the hypotheses.

Millennial Customer

The study is focused on the millennial customer, and it is essential to provide some facts on this market segment. Millennials or Generation Y or Eco boomers, as they are known, make up a dynamic and exciting group of the world population that is involved in consuming various products and services. Since they make up such a large group of the world community, marketers see great value in conducting studies on the millennial market segment and their buying behaviour. By understanding this segment, marketers can launch marketing strategies that can capture this segment's attention and further enhance its spending potential in the market. Unpacking the characteristics of this group makes millennials easier to understand.

Moreno, Lafuente, Carreón & Moreno (2017:137) state that :"The term millennium is used throughout the world; however, birth dates cause a lot of debate worldwide since there are a variety of differences in the period when this generation is statistically analyzed.". DeChane (2014: 1-2) indicates that the millennial generation is a grouping of people born roughly between 1980 and 2000. According to Raphelson (2014:1-2), Neil Howe, the historian, coined the term "millennial" to describe the generation born between 1981 and 2003.Taking this into account, the authors chose their millennial sample from those born between 1980-2002 for the study.

Ferguson (2012:1-2) posits that millennials make up a vast number of individuals linked together through the globalised world networks. Due to the vastness of the generation, businesses and marketers focusing on millennials have become a necessity and a priority as opposed to an optional decision. The estimated size of the overall global millennial generational cohort is around 1.7 billion people. According to Holmes (2015: 1), the largest population of millennials are in India and China. BIZCOMMUNITY (2018:1) indicates that South Africa alone has over 14 million millennials, which makes up approximately 27% of the population. According to Stokes (2015:1-2), Germany has approximately 14.68 million millennials, amounting to about 18% of their population.

Henseler (2012: 23) argues that millennials are a generation in search of human dignity, and that they value their freedom. Gerzema & D'Antonio (2011:1) indicate that millennials are a set of pioneers who have been changing their spending behaviour. They had aligned with companies that they can identify with in terms of their values and beliefs. Lee and Kotler (2016:185-192) argue that millennials often use and adapt technology in their daily lives. They have a set of values, life experiences, motivations, and common buying behaviours. Furlow (2012: 62) believes that the members of this generation are trustworthy, tolerant, individualistic, and academically prepared and have expertise in technological use that distinguishes them significantly from the generations that preceded them.

The next vital theme to discuss is emotions and personality traits and their impact on consumer behaviour.

Millennials emotions and personality traits during COVID-19 and its impact on their purchases

The unknown virus was first detected in December 2019 and subsequently identified as the 2019 novel coronavirus (COVID-19), based on the symptoms and laboratory test results (Huang, Wang, Y, Li, Ren, Zhao, Hu, Zhang, Fan, Xu, Gu & Cheng, 2020: 497-498). COVID-19 was a sudden and unexpected pandemic never before experienced by humankind at this magnitude. How millennials are making purchasing decisions about products during COVID-19 is a critical consideration for marketers. In this study, the researchers analyse how fear and stress during the COVID-19 pandemic drove millennials in Germany and South Africa towards making certain product purchases. Tsao & Chang (2020: 1801) argue that personality traits and psychological states influence the formation of a consumer's purchase motivation. Therefore, personality traits can, to some degree, explain a person's behaviour and hence, their consumption behaviour and the purchasing decisions taken. During COVID-19, there was a shift in buying behaviour stimulated by fear and uncertainty. The pandemic gave rise to some overwhelming emotions and attitudes that encouraged millennials towards extreme buying of certain products. According to Meierhans (2020:1), Australia like many other countries in the world experienced panic buying and stockpiling of PPEs, food items and general household supplies, despite there being no indication of an impending shortage.

Hawkins and Mothersbaugh (2010: 362-397) indicate that the internal influences that affect consumer behaviour consist of an individual's perception, learning, memory, motives, personality, emotions and attitudes. South Africa had a very harsh lockdown, and many products were not allowed to be sold during certain stages of the lockdown. Just before lockdown, retail outlets experienced mass buying behaviour in preparation for the lockdown in SA. Only essential goods and services were sold at the beginning of lockdown in SA. Essential goods and services included shops and retail outlets that catered for food and groceries, medical practices or any business selling medical products, hospitals, police, army, navy, ATMs and certain banks, petrol stations and transport services. Restaurants, pubs, hotels and tourism agencies were closed. In lockdown, stage four and five, there was a ban on alcohol and cigarette sales. Clothing stores were also closed during the first few weeks of lockdown. South Africa had one of the harshest lockdowns in the world. In Germany, all goods were available. The infection rate in Germany was low compared to South Africa. Since SA was rated at number 5 in the world with one of the highest infection rates, the drastic lockdown in SA was implemented by the government to curb the spread of COVID-19. Due to the high infection rates and the strict lockdown, the SA millennial customer might have experienced higher levels of fear, anxiety and stress. These personality traits and emotions could have influenced their purchases of certain products. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) argue that uncertainty and fear during COVID-19 moved to alter consumption patterns.

Consumer decision making was further exacerbated by periods of government-enforced self-isolation for returning travellers or individuals who they believed might have been exposed to the virus, as well as broader city- or country-wide periods of social distancing where people were largely restricted to their homes.

Based on the above discussion, we constructed Hypothesis 1:

H1: There is a statistically significant difference between the COVID-19 specific personality traits in South Africa and Germany.

Fear of the unknown is reflected in panic buying behaviours as consumers channel their lack of knowledge about crises into actions that are perceived as comforting, providing security or that alleviate stress (Elmore 2017:405). Maslow's hierarchy of needs (1943) also indicates that people have a basic survivalist need. Loxton et al. (2020: 5) in their study argue that in applying Maslow's Hierarchy of Needs (1943), they analyse the satisfaction or utility behind particular wants and needs, and hence the ways that consumers are motivated to prioritise spending. Customers prioritised discretionary rather than non-discretionary expenditures. Colloquially, Maslow's theory might classify purchases as "needs" versus "wants." Food, clothing, shelter, and then safety are factors that propel customers, especially during a pandemic to indulge in mass buying. Yoon, Narasimhan & Kim (2018:3615-3616) suggest that spending at retail outlets increased significantly in preparation for an impending disaster to prepare for the unknown.

Since coronavirus pandemic is similar to a natural disaster, Larson & Shin (2018:295) state that: "In times of natural disaster, buying frenzies in preparation for the upcoming event are to be expected." Elmore (2017:404) indicate that a week before the hurricane Irma's landfall hit the state of Florida, compared to the same period a year earlier, spending at gas stations rose and were recorded as high as 63.2%, at grocery stores 41%. Overall retail spending rose 20% in six of the major metro areas across the Florida region. This phenomenon is understandable as the human race has a strong will to survive which drives them to prepare for times of hardship. According to BBC News Australia (2020:1), customers have been involved in panic buying, stockpiling and mass buying. Measures had to be quickly implemented by local stores to manage this type of buying behaviour. They included free delivery of food products to customers to avoid panic-buying. Stores placed restrictions on the number of customers allowed in the store at any given time to avoid overcrowding, restrictions were also imposed on the number of items that customers could purchase due to their possible scarcity. Stores also expanded on the number of suppliers they previously did business with, to avoid food shortages. Yoon, Narasimhan & Kim (2018:3615) state that: "Upon detecting any event that can lead to upstream disruptions, consumers often stockpile supplies to mitigate the risk of future shortages. When rice production in Australia was reduced by 98% after a long drought period in 2008, for instance, consumers in Vietnam, India and Hong Kong began to stockpile rice due to the fear of insufficient future supply, which actually made the shortage problem worse. After the radioactive leak at Japan's Fukushima nuclear plant in 2011, for instance, consumers went on panic buying of various products such as iodine tablets (in Bulgaria), salt (in China), red wine and seaweed (in Russia) that were rumoured to prevent radiation poisoning."

From the literature discussion, mass buying and stockpiling behaviour by consumers has taken place in anticipation of their fear and stress surrounding COVID-19. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) add that the restrictions imposed by governments influenced and changed customers' purchases of products. As the fear of infection increased globally, consumer behaviour changed and affected the timing, breadth and volume of purchases.

Based on the above discussion, we constructed Hypotheses 2 and 3:

H2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on the purchasing of food and groceries during COVID-19.

H3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

Wen, Sun, Li, He & Tsai (2019: 9) posit that during a health crisis, people form risk perception about the situation and react accordingly. Yuen, Wang, Ma & Li (2020:10) add that the degree of risk perceived by a customer can determine his or her assessment of the threat of an outbreak, which can be measured by both the susceptibility and severity of the event. Both susceptibility and severity are sub-dimensions of the health belief model, which posits that customers are motivated to undertake self-protection behaviour to minimise risk. According to Aliperti and Cruz (2019:16), hoarding behaviour prior to or during a disaster is perceived as a form of self-protection behaviour taken by the consumer in an attempt to minimise risk. Mehta, Saxena, & Purohit (2020: 293) believe that the most critical factors which model the consumer's behaviour in a crisis are risk attitude and risk perception. Risk attitude reflects the consumer's interpretations concerning the risk content and how much he or she dislikes the content of that risk. Risk perception demonstrates the interpretation of the consumer towards the chance of being exposed to the risk content. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2) add that the COVID-19 crisis may increase consumer fear but also the broader repercussions of this fear and uncertainty reflected in new spending decisions. This consumer spending could explain somewhat the need for mass purchases of PPEs worldwide. PPEs like masks were seen as essential products when appropriately used, served as preventing the spread of the virus.

Based on the above discussion, we constructed Hypothesis 4:

H4: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on PEE purchases made during COVID-19 pandemic.

The media has been reporting daily on COVID-19, and as infection rates increased worldwide, this has stimulated or driven- down certain shopping patterns as people's priorities have changed in keeping with this global crisis. In SA, there was a ban on alcohol lasting many months during the lockdown, and in Germany, alcohol was freely available. The researchers believe that COVID-19 and the emotions (stress, fear and anxiety) that people have been feeling surrounding the pandemic had stimulated certain buying behaviour. The pandemic brought with it high levels of stress, and some people needed alcohol to serve as a buffer during this time. Tannenbaum, Hepler, Zimmerman, Saul, Jacobs, Wilson & Albarracin (2015: 1178) posit that fear and stress appeal affects the purchase behaviour of certain goods. Loxton, Truskett, Scarf, Sindone, Baldry & Zhao (2020:2-7) add that the COVID-19 has had a critical impact on consumer behaviours globally, as a rise in restrictions placed by governments and continued uncertainty about the pandemic had led to irregular and irrational consumer activity.

Based on the above discussion, we constructed Hypothesis 5:

H5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

RESEARCH METHODOLOGY

There are three types of research design: qualitative, quantitative and mixed methods (Creswell & Creswell, 2018:47). This research is a quantitative study. A cross-sectional survey research strategy was adopted in Germany and South Africa.

Data Collection Instrument and Data Collection

The data were collected using a 7-point Likert-like scale questionnaire, that asked questions of millennial respondents in both countries, on their perceptions towards buying behaviour and consumption of particular products during COVID-19. Bougie and Sekaran (2019:204) comment that the Likert scale technique is used to assess how respondents agree or disagree with a given statement. Hair, Celsi, Ortinau & Bush (2008:155) argue that closed-ended questions are used for easy collection and analysis of data.

In South Africa and Germany, computer- assisted questioning was done via an online survey. In South Africa, an online panel access provider was used to collect data from the panel respondents. The data collection took place between 5-25 August 2020. In Germany, the respondents were recruited via social and personal networks between 30 July 2020 to 21 August 2020, and the online survey conducted using the online tool Unipark.

Target population

The target population are millennials born during 1980-2002 who had internet access and who lived in South Africa or Germany. In South Africa, the target population additionally focusses on LSM groups 7 to 10. Some of the analysed product categories are expensive, and the upper- income consumers buy them. Therefore, it was decided to select the South African Living Standards Measure (LSM) categories of 7 to 10 (predominantly urbanised and wealthier) as the target population (Chronison, 2012). Dobbelstein, Mason & Kamwendo (2020:70) add that the selection of 7-10 LSM groups is supported by the fact that South Africa's Gini coefficient is (63.0) and in German (31.7). These statistics provided by World Bank Group (2019) are indicative of Germany having a much wider spread of wealth through the country. In SA, a relatively small proportion of the population are able to afford products with higher- priced product categories, whereas in Germany, income levels are generally higher; therefore, most of the German population can afford slightly higher price product categories.

Sampling method and structure, reliability and limitations

Non-probability sampling method, namely judgement quota sampling method, is employed in selecting a sample of respondents from Germany and South Africa. In South Africa, the LSM group influences the buying behaviour quotas for the LSM groups that were set. To make sure that the sample is a good representation of the population, these LSM groups were included. In addition, quotas were set for gender and four different age groups.

In Germany, additional quotas for age, gender and income are set within the selected target group. This is based on the fact, that these criteria have an influence on the shopping behaviour, and to assure that the sample represents the selected target population for Germany (Mason, Dobbelstein & Corbishley, 2019:67).

A total sample of 2118 respondents in Germany and South Africa is included in the survey. A comprehensive quality check of the answers was done based on the following criteria:

- Age and completeness of the survey
- Available LSM information
- Plausibility check regarding the fitting of the answers to 3 different questions.

Based on the above, 493 questionnaires were removed from the sample. Finally, 949 quality checked, valid answered questionnaires remained for Germany and 676 for South Africa. Because of the different ways of data collection, the number of participants was easier to control in South Africa than in Germany. The quality of answers provided through a panel provider is usually higher compared to those from freely recruited participants. Therefore, the over-recruitment in Germany was higher. In this specific instance, the answer quality of the voluntarily recruited participants was high, resulting in fewer cases than expected that had to be removed in Germany because of quality control. Therefore, the sample size in Germany is more extensive than in South Africa. The researchers decided not to eliminate the exceeding questionnaires. Overall, the sample reflects the target population in both countries very well.

As Table 1 shows, in South Africa, all given quotas were excellently achieved. In Germany the highest income class (3.000€ + net household income) and the youngest age class (born 1996 – 2002) are over- represented.

TABLE 1
DEMOGRAPHIC PROFILE OF SAMPLE

	South Africa (n = 676)		Germany (n = 949)	
Criterion	**Planned**	**Actual**	**Planned**	**Actual**
LSM 7	36,0%	34,9%	not applicable	
LSM 8	23,0%	22,6%	not applicable	
LSM 9	25,0%	25,6%	not applicable	
LSM 10	16,0%	16,9%	not applicable	
Male	49,6%	51,0%	51,6%	47,7%
Female	50,4%	48,8%	48,4%	51,7%
Income* <1.000€	not applicable		31,0%	24,9%
Income* 1.000€ - <2.000€	not applicable		38,0%	30,0%
Income* 2.000€ - <3.000€	not applicable		22,0%	26,0%
Income* 3.000 and more	not applicable		9,0%	19,1%
Born 1980 - 1985	19,0%	17,8%	27,0%	19,8%
Born 1986 - 1990	25,0%	25,0%	24,0%	17,5%
Born 1991 - 1995	25,0%	27,1%	22,0%	20,7%
Born 1996 - 2002	31,0%	30,2%	27,0%	42,0%

*Income: monthly household nett

TABLE 2
RELIABILITY – CRONBACH'S ALPHA

Dimension	Cronbach's Alpha
Covid-19 specific fear	0,742
Covid-19 specific utilitarianism	0,700
Covid-19 specific stress	0,804

The Cronbach's alpha was an excellent instrument used to test reliability in the study, since, it was appropriate for the type of data collected, i.e. to evaluate dimensions or constructs based on more than 1 item. Table 2 indicates the values of Cronbach's Alpha scores in the study.

The dimensions are reliable since the values are above 0.6.

There was one major limitation of the study. The results could not be generalised to the world millennial market segment as the research was conducted on millennials in Germany and SA only. However, the researchers believe that since this is a large market segment that has a very high spending power in the global economy, the research gathered on this study makes it justifiable and highly relevant.

RESULTS

In the discussion that follows the results in the empirical study will be outlined and discussed in detail.

Descriptive statistics

Table 3 shows the mean values for South Africa, Germany and in total for the analysed questions.

The two statements with the highest agreement show a high tentativeness regarding shopping during COVID 19. Based on the higher cases of COVID-19 in South Africa compared to Germany, the findings are not surprising that the respondent's agreement to "I only go to the stores if I really need something" is much higher in South Africa (.6.19) than in Germany (4.64).

TABLE 3
MEAN VALUES OF QUESTION RESPONSES

Country	Germany	South Africa	Total
During COVID-19 I only go to the stores if I really need something.	4,64	6,19	5,28
With COVID-19, shopping in stores is no long fun and entertaining.	4,11	5,34	4,62
I also enjoy my shopping in the stores with COVID-19.	4,59	4,55	4,57
I'm afraid of accidentally infecting someone with COVID-19.	4,16	5,10	4,55
I'm afraid of contracting COVID-19 and getting ill.	3,52	5,90	4,50
I feel stressed by wearing a face mask.	4,09	4,18	4,13
Because COVID-19 limits shopping with friends, I enjoy shopping less.	3,81	4,43	4,07
I feel stressed about all the COVID-19 rules and regulations that apply when entering a store.	3,67	4,33	3,94
I almost never go to the store due to COVID-19 and only shop online when I need something.	3,16	3,88	3,46
I have a lower income because of COVID-19.	2,43	4,88	3,44
Because of COVID-19 I have got less time to shop in stores.	2,11	4,98	3,30
COVID-19 makes it more difficult for me to reach stores.	2,37	4,52	3,26
I feel uncomfortable because in COVID-19 times there are less people in the stores.	2,12	3,28	2,60

Scale: 1 = totally disagree - 7 = totally agree

TABLE 4
PERCEIVED BUYING BEHAVIOUR PRE, DURING AND POST LOCK DOWN

	Pre lockdown		During lockdown		Post lockdown	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Food & Groceries	4,78	1,428	4,67	1,513	4,24	1,237
Alcoholic Beverages	3,50	1,781	3,11	1,817	3,35	1,619
Clothing	3,14	1,484	2,77	1,591	3,64	1,502
Leisure Goods, e.g. sports articles, hobbies, board games	3,40	1,669	3,08	1,740	3,29	1,468
Toiletry, e.g. toilet paper, soap	4,72	1,375	4,56	1,489	4,27	1,244
DIY & home improvement goods	3,72	1,583	3,34	1,733	3,50	1,468
PPE's & medical supplies	4,66	1,576	4,66	1,621	4,20	1,486

Scale: 1 = much less – 7 = much more

Table 4 includes the perceived buying behaviour pre, during and post lockdown.

In Germany, all products were available, even during the lockdown. There was no ban on any product categories like alcohol or cigarettes. In Germany, alcohol and cigarettes were also available in any grocery store. During lockdown, shops for non-essential products like clothing were closed. These products, however, were always available online, which is one reason why the authors selected only people with internet access as the target population.

During the lockdown in SA, a ban on specific products like alcohol and cigarettes was imposed. The table indicates the mean values for both countries. For Germany, the mean scores for buying alcoholic beverages during lockdown is 3,82, indicative of a slight reduction. For South Africa, it is 2,10, which indicates a high reduction. Out of the 671 South African respondents' who answered that question, 417 said "much less (1)". Fifty-seven choose the middle category, these might be people who have not bought alcohol before. 7.5% answered that they bought more alcohol during the lockdown. These questionnaires were double plausibility checked. One explanation for the results might be that respondents in SA bought alcohol illegally.

Formatting Relevant Dimensions

Thirteen statements were used to measure Corona specific personality traits. An exploratory factor analysis was conducted to identify dimensions of personality traits. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0,845. Bartlett's Test of Sphericity shows an Approx. Chi-Square of 4440,65 which is highly significant ($p<0,001$). Finally, eleven items were used to create three different dimensions. Table 5 indicates the varimax rotated component matrix based on Principal Component Analysis using Kaiser Normalization as Rotation Method. Three dimensions, named "Corona specific fear", "Corona specific utilitarianism" and "Corona specific stress" can be clearly identified.

Table 5 indicates that the stress dimension is only measured by two items. Originally time stress was reflected in the item "Because of COVID-19 I have got less time to shop in stores." This was intended to be include in this dimension, but it showed much higher loadings for the dimension "fear". Since Cronbach's Alpha (0.804) and the factor loadings (0.836 / 0,777) are very high, face and expert validity confirmed the measurement of the dimension with only two items as being acceptable.

Hypothesis 1: There is a statistically significant difference between the COVID- 19 specific personality traits in South Africa and Germany.

The hypothesis is accepted ($p<0,01$).

TABLE 5
EXPLORATORY FACTOR ANALYSIS OF COVID-19 SPECIFIC PERSONALITY TRAITS

Rotated Component Matrix[a]

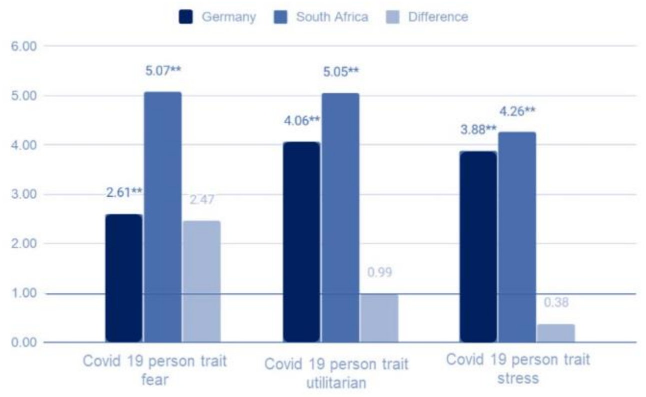
Covid-19 specific personality traits	Component - Cov. 19 spec dim		
	1: fear	2: utilitarianism	3: stress
I'm afraid of contacting COVID-19 and getting ill. (corona_fear_1)	,645	,352	-,196
I have a lower income because of COVID-19. (corona_fear_3)	,742	-,014	,084
I feel stressed by wearing a face mask. (corona_stress_1)	,000	,075	,836
I feel stressed about all the COVID-19 rules and regulations that apply when entering a store. (corona_stress_2)	,187	,214	,777
Because of COVID-19 I have got less time to shop in stores. (corona_stress_3)	,753	,245	,147
COVID-19 makes it more difficult for me to reach stores. (corona_utilitarian_1)	,705	,236	,277
During COVID-19 I only go to the stores if I really need something. (corona_utilitarian_2)	,339	,699	-,149
I almost never go to the store due to COVID-19 and only shop online when I need something. (corona_utilitarian_3)	,259	,463	,209
I also enjoy my shopping in the stores with COVID-19. (corona_hedonic_1_inverted for ANALYSIS)	,028	,760	,139
Because COVID-19 limits shopping with friends, I enjoy shopping less (corona_hedonic_3)	,109	,433	,369
With COVID-19, shopping in stores is no long fun and entertaining (corona_hedonic_4)	,184	,681	,351

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Figure 1 provides an overview of the values for the dimensions for both countries (Germany and South Africa). As the single items, the dimensions are measured on a scale 1 = very low to 7 very high. It can be seen that all dimensions show a higher value for South Africa than for Germany. COVID-19 specific fear dimensions in South Africa are (5,07) is nearly twice as high as compared to Germany (2,61). The utilitarian dimension shows a highly significant difference of (0.99), with (5.05) for South Africa and (4.06) for Germany. The lowest but still highly significant difference can be seen for Corona specific stress which is (4.26) in South Africa and (3.88) in Germany.

FIGURE 1
COUNTRY DIFFERENCES REGARDING DIMENSIONS



** All values are highly significant (0,00% to 0,01%), n=666-669 (Ger), n=946-949 (ZA)

The influences of these COVID 19 specific personality traits on the shopping behaviour are analysed using univariate regression analysis. The three dimensions are separately used as independent variables. The dependent variables are the buying behaviour for groceries, alcoholic beverages, clothing, leisure goods, toiletry, DIY and PPEs. The regression analyses are done for the total sample as well as separately for both South Africa and Germany. Table 6 shows the results for the total sample, Table 7 for South Africa and Table 8 for Germany.

A limitation of the analysis is that most of the r2 are low. In the discussion the researchers will concentrate on a few, statistically significant, and interesting results, i.e. the influence of:

- Fear on Food & Grocery Purchase
- Fear on Toiletry Purchase
- Fear on PPE Purchase
- Fear and stress on Alcohol Beverage Purchase

TABLE 6
UNIVARIATE REGRESSION ANALYSES FOR TOTAL SAMPLE (SOUTH AFRICA & GERMANY)

	R Square		Standardized Coefficients					
Product Category	**Adj. R Sq.**	**Sig.**	**Coeff Fear**	**Sig. Fear**	**Coeff Utilitarian**	**Sig. Utilitarian**	**Coeff Stress**	**Sig. Stress**
Pre Grocery	0,084	0,000	0,271	0,000	0,047	0,113	-0,024	0,353
Lockdown Grocery	0,063	0,000	0,259	0,000	0,001	0,968	-0,031	0,239
Post Grocery	0,079	0,000	0,310	0,000	-0,045	0,126	-0,044	0,092
Pre Alc. Beverages	0,050	0,000	-0,219	0,000	-0,028	0,359	0,042	0,116
Lockdown Alc. Beverages	0,129	0,000	-0,347	0,000	-0,050	0,082	0,090	0,000
Post Alc. Beverages	0,077	0,000	-0,277	0,000	-0,024	0,411	0,071	0,006
Pre Clothing	0,012	0,000	-0,101	0,000	-0,036	0,239	0,057	0,035
Lockdown Clothing	0,029	0,000	-0,137	0,000	-0,075	0,014	0,047	0,080
Post Clothing	0,011	0,000	-0,040	0,172	-0,096	0,002	0,021	0,427
Pre Leisure	0,047	0,000	-0,239	0,000	0,035	0,247	0,016	0,540
Lockdown Leisure	0,055	0,000	-0,230	0,000	-0,022	0,427	0,014	0,603
Post Leisure	0,048	0,000	-0,181	0,000	-0,082	0,006	0,051	0,054
Pre Toiletry	0,128	0,000	0,333	0,000	0,032	0,263	0,031	0,226
Lockdown Toiletry	0,069	0,000	0,219	0,000	0,075	0,012	0,000	0,992
Post_Toiletry	0,106	0,000	0,331	0,000	-0,007	0,802	0,003	0,901
Pre DIY	0,003	0,051	-0,071	0,014	0,000	1,000	0,012	0,665
Lockdown DIY	0,015	0,000	-0,097	0,001	-0,058	0,057	0,030	0,272
Post DIY	0,008	0,001	-0,056	0,054	-0,067	0,029	0,024	0,375
Pre PPE	0,034	0,000	0,157	0,000	0,060	0,048	-0,022	0,408
Lockdown PPE	0,033	0,000	0,143	0,000	0,071	0,020	-0,011	0,671
Post PPE	0,061	0,000	0,258	0,000	-0,004	0,896	-0,031	0,240

Highly significant (p < 0,01) Significant (p < 0,05)

TABLE 7
UNIVARIATE REGRESSION ANALYSES FOR SOUTH AFRICAN SAMPLE

	R Square		Standardized Coefficients					
Product Category	**Adj. R Sq.**	**Sig**	**Coeff Fear**	**Sig Fear**	**Coeff Utilitarian**	**Sig Utilitarian**	**Coeff Stress**	**Sig Stress**
Pre Grocery	0,002	0,206	0,029	0,533	0,065	0,163	-0,006	0,887
Lockdown Grocery	0,001	0,267	0,091	0,054	-0,027	0,564	-0,033	0,428
Post Grocery	0,012	0,012	0,156	0,001	-0,082	0,077	-0,031	0,460
Pre Alc. Beverages	-0,001	0,566	-0,044	0,356	-0,023	0,618	0,022	0,600
Lockdown Alc. Beverages	0,002	0,228	0,041	0,390	-0,076	0,102	0,060	0,152
Post Alc. Beverages	0,004	0,117	-0,062	0,188	-0,021	0,657	0,090	0,030
Pre Clothing	0,001	0,279	-0,068	0,151	0,072	0,121	0,036	0,386
Lockdown Clothing	-0,003	0,862	0,014	0,765	-0,032	0,495	0,026	0,538
Post Clothing	-0,004	0,968	0,002	0,973	0,007	0,889	-0,021	0,617
Pre Leisure	0,003	0,186	0,028	0,552	0,070	0,132	-0,013	0,755
Lockdown Leisure	-0,001	0,489	0,030	0,531	0,021	0,650	-0,061	0,148
Post Leisure	-0,001	0,512	-0,024	0,616	0,001	0,991	0,063	0,135
Pre Toiletry	0,038	0,000	0,193	0,000	0,018	0,693	0,007	0,864
Lockdown Toiletry	0,019	0,001	0,123	0,009	0,061	0,186	-0,047	0,253
Post Toiletry	0,034	0,000	0,198	0,000	-0,018	0,695	0,021	0,607
Pre DIY	0,017	0,002	0,105	0,026	0,047	0,309	0,024	0,557
Lockdown DIY	-0,001	0,480	0,065	0,170	-0,002	0,967	-0,011	0,794
Post DIY	0,001	0,321	0,082	0,085	-0,056	0,237	0,013	0,762
Pre PPE	0,024	0,000	0,111	0,017	0,082	0,075	-0,003	0,939
Lockdown PPE	0,022	0,001	0,053	0,252	0,135	0,004	-0,031	0,458
Post PPE	0,042	0,000	0,217	0,000	0,016	0,729	-0,044	0,286

Highly significant (p < 0,01) Significant (p < 0,05)

TABLE 8
UNIVARIATE REGRESSION ANALYSES FOR GERMANY

Product Category	R Square		Standardized Coefficients					
	Adj. R Sq.	Sig	Coeff Fear	Sig. Fear	Coeff Utilitarian	Sig Utilitarian	Coeff. Stress	Sig Stress
Pre Grocery	0,010	0,005	0,108	0,001	0,020	0,581	0,007	0,844
Lockdown Grocery	0,003	0,115	0,078	0,021	0,002	0,961	0,003	0,926
Post Grocery	0,003	0,131	0,038	0,261	-0,052	0,164	-0,040	0,267
Pre Alc. Beverages	0,000	0,396	-0,049	0,151	-0,018	0,626	0,029	0,417
Lockdown Alc. Beverages	0,001	0,292	-0,048	0,157	-0,015	0,683	0,049	0,178
Post Alc. Beverages	-0,001	0,629	0,036	0,291	0,018	0,630	-0,006	0,866
Pre Clothing	0,006	0,031	0,008	0,815	-0,103	0,005	0,075	0,039
Lockdown Clothing	0,007	0,027	-0,039	0,245	-0,091	0,015	0,039	0,281
Post Clothing	0,022	0,000	0,046	0,172	-0,179	0,000	0,061	0,091
Pre Leisure	-0,002	0,739	-0,034	0,312	0,024	0,513	-0,013	0,725
Lockdown Leisure	-0,002	0,680	0,027	0,424	-0,039	0,289	0,021	0,557
Post Leisure	0,011	0,005	0,041	0,222	-0,121	0,001	-0,002	0,949
Pre Toiletry	0,020	0,000	0,098	0,004	0,015	0,678	0,091	0,011
Lockdown Toiletry	0,023	0,000	0,096	0,004	0,060	0,104	0,069	0,053
Post Toiletry	-0,002	0,791	0,029	0,391	-0,027	0,463	0,010	0,784
Pre DIY	0,001	0,235	0,043	0,207	-0,016	0,669	-0,053	0,145
Lockdown DIY	0,004	0,094	0,045	0,181	-0,089	0,016	0,031	0,392
Post DIY	0,002	0,165	0,048	0,156	-0,067	0,070	-0,007	0,849
Pre PPE	0,013	0,002	0,111	0,001	0,045	0,222	-0,047	0,192
Lockdown PPE	0,010	0,005	0,106	0,002	0,011	0,769	0,025	0,493
Post PPE	0,007	0,018	0,102	0,002	-0,044	0,229	-0,022	0,547

Highly significant (p < 0,01) Significant (p < 0,05)

Hypothesis 2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on purchasing of food and groceries during COVID-19.

The hypothesis is accepted.

Figure 2 indicates the influence of fear on purchasing food and groceries during the pandemic. The numbers depicted in the figure are the coefficients of the regression analysis described above. Fear indicate a mostly highly significant influence on purchasing food and groceries. The higher a millennials' COVID-19 specific fear, the more food and groceries he/she buys. This applies to all three phases of COVID-19 namely: pre, during and after lockdown.

Hypothesis 3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

The Hypothesis is accepted.

Figure 3 indicates the influence of fear on toiletry purchases. The results suggest that in total, fear has led to a rise in toiletry purchases, especially pre and post lockdown. In Germany, fear increases purchasing of toiletries equally, especially pre and during lockdown. South African respondents registered lower levels of purchases for toiletries as compared to German respondents. Since German millennials could purchase online, these possibilities were not available to majority of SA millennials, as there were fewer stores selling online.

Hypothesis 4: There is a statistically significant difference between Germany and South Africa’s millennial consumers with regard to the influence of fear on PEE Purchases made during COVID-19 pandemic.

The Hypothesis is accepted.

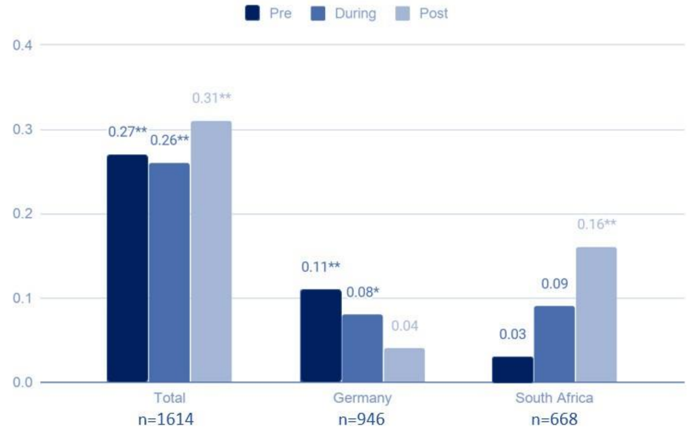
As denoted in Figure 4, the results suggest the influence of fear on PEE purchases. The results indicate that the influence in Germany is stable and on a lower level. In contrast, within South Africa, the influence increases mainly before and after Lock down stage 4 & 5, where many non- essential businesses were shut down.

Hypothesis 5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

The Hypothesis is accepted.

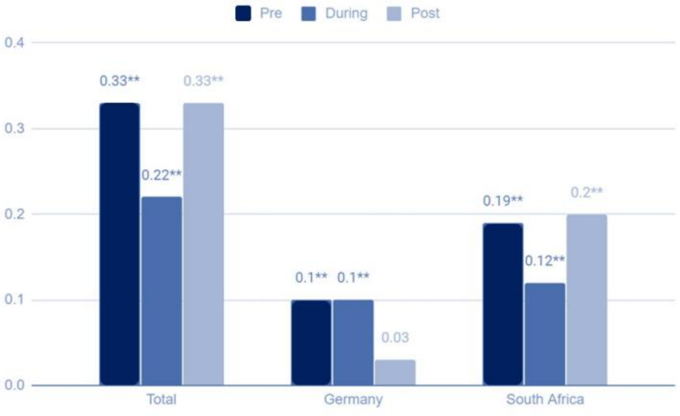
In Figure 5, the influence of fear and stress on the purchase of alcoholic beverages is shown. Because of the significance, the results concentrate on the total sample. In total, it is clear that the higher the fear, the fewer alcoholic beverages are bought by millennials’ during COVID-19.

FIGURE 2
REGRESSION COEFFICIENTS OF FEAR AND FOOD & GROCERY PURCHASE



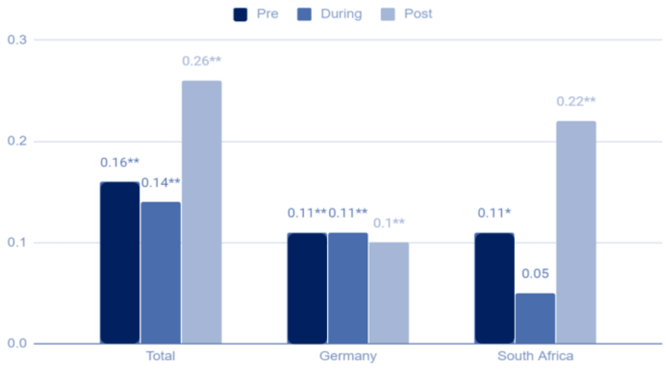
** highly significant * significant

FIGURE 3
REGRESSION COEFFICIENTS OF FEAR AND TOILETRY PURCHASE



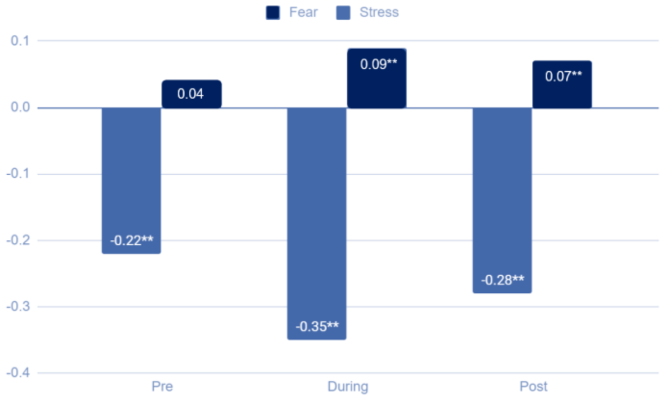
** highly significant * significant

FIGURE 4
REGRESSION COEFFICIENTS OF FEAR ON PPE PURCHASE



** highly significant * significant

FIGURE 5
REGRESSION COEFFICIENTS OF FEAR AND STRESS AND ALC. BEVERAGE PURCHASE (IN TOTAL)



** highly significant * significant

DISCUSSION

Hypothesis 1: There is a statistically significant difference between the COVID-19 specific personality traits in South Africa and Germany.

The higher value for the South African respondents' relating to the COVID-19 specific fear could be attributed to South Africa having a very high infection rate as compared to Germany. In SA, millennials fear contracting COVID-19 during shopping.

In South Africa, due to the pandemic, millennial customers are inclined to want convenience and easy access to stores. They would rather frequent shops that are close to them. They would also want to frequent stores that have fewer shoppers, to make their shopping experience easier and more enjoyable. Since they want to avoid malls and crowed stores because they fear becoming infected, it is understandable why millennial shoppers' utilitarian scores for the South African millennial respondents are higher than the German millennial respondents. Vinerean (2013:35) states that: “Utilitarian consumer behaviour has been described as task-oriented and rational in that customers' functional utility is dependent on whether their consumption needs, which inspire the shopping, were met successfully.” Kim (2002:434) add that these customers look for a shopping experience that is convenient and makes their lives more enjoyable and easier.

High stress-levels for both South African and German respondents is understandable, given that COVID-19 has brought on new regulations and safety requirements during shopping. Wearing the face mask is stressful for millennials who have chronic asthma and other respiratory diseases and can impact on how often they shop. South African respondents could have added stress brought on by the new strict shopping regulations. The customers' have to wear masks, and a limited number of shoppers are allowed in a store. Due to negligence by some store managers, who do not abide by the rules, this makes social distancing very difficult to adhere to, thus adding to SA respondents' stress levels being higher than the German respondents. During COVID-19, shopping has become more stressful, due to wearing a mask, than previously in both countries. This can alter buying behaviour as respondents, during the pandemic, no longer see shopping as relaxing, but somewhat stressful. Also, in SA, many people are wearing the masks incorrectly, so this causes higher stress levels reported in the study by the SA respondents who are afraid of contacting the virus during their shopping encounters.

Hypothesis 2: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on purchasing of food and groceries during COVID-19.

The higher the fear of respondents during COVID-19, the more they purchased. Yoon, Narasimhan and Kim (2018:3615-3616) suggest that spending at retail outlets increased significantly in preparation for impending disasters to prepare for the unknown. According to Hall, Prayag, Fieger, & Dyason (2020:8) hoarding behaviour before or during a disaster can be viewed as a form of self-protection behaviour. The results indicate a further development in both countries. In Germany, the impact of fear on grocery shopping decreases throughout the three phases, whilst in South Africa, it rises. The researchers believe that as the infection rate rose during the different stages of lockdown, there was an increase in mass purchases, as millennial shoppers felt they had to mass buy as a way to survive the pandemic. The results concur with literature. Upton and Nuttall (2014:1499-1500) add that product supply is susceptible to oscillatory behaviour when faced with abrupt changes in demand, such as panic buying and stockpiling. Independent supermarkets have also been affected by the high demand for food products. According to Bachelor (2020:1) the food sector, including food distribution and retailing, has been put under strain as a result of people panic-buying and stockpiling on food.

Hypothesis 3: There is a statistically significant difference between Germany and South Africa's millennial consumers with regard to the influence of fear on toiletry purchasing during COVID-19.

The results indicate that in total, fear led to a rise of toiletry purchases, especially pre and post lockdown. Regarding the results in South Africa, higher levels of fear contribute to higher purchases of toiletries mainly, pre and post lockdown. During lockdown, fewer toiletries were purchased in South Africa probably because of no stocks available. Hand wash became very sought after and, people were buying in bulk thus leading to stocks running out and shelves being cleared out. Certain toiletries were also imported and were not available as they were either stuck at ports or still on the way to the shops. The strict regulation during stage 5 and 4 lockdown in SA made it difficult for certain exclusive retail outlets, which kept stock of SA millennials’ exclusive toiletries, to be open, as they were considered stores that were selling non-essential products. Since, only some consumers had online-shopping possibilities, it was conceivably the reason why the South African millennials registered lower purchases of toiletries as opposed to the German millennials. Added to this, was the continued load shedding, which made online shopping difficult for South African shoppers as opposed to German shoppers. In Germany, online shopping is much more aggressively practised by conventional retailers than in SA.

Hypothesis 4: There is a statistically significant difference between Germany and South Africa’s millennial consumers with regard to the influence of fear on PEE purchases made during COVID-19 pandemic.

South African respondents registered a higher purchase of PPEs. Due to fear of contracting the virus and as a protective and preventative measure, SA millennials bought more PPEs. In SA, masks were in big demand. Fear propelled millennials’ in SA to purchase more PPEs than in Germany. Research conducted by Yuen et al. (2020:1) in response to the coronavirus established four key factors causing panic buying: (1) perception, (2) fear of the unknown, (3) coping behaviour and (4) social psychology. They concluded that when consumers perceived the probability and consequences of contracting a disease to be high, they were motivated to undertake self-protective activities, including panic buying, to minimise perceived risk. The findings concur with literature, as purchases of masks increased since millennials in both countries feared becoming infected with the virus. High volumes of mask sales were reported in the study in both countries, as millennials’ saw the use of masks as a preventative measure to limit the spread of the virus.

Hypothesis 5: There is a statistically significant influence of fear and stress on the purchase of alcoholic beverages during the different stages of the lockdown.

The millennials are very influenced by health issues and over-indulgence in alcohol during the pandemic could be seen as a form of risky behaviour towards their health and immune system. This could possibly be why alcohol sales dropped. In South Africa, millennials feared the police, as alcohol was banned during lockdown stage 5 & 4, resulting in low sales in South Africa for liquor. Referring to the personality trait stress, results are contrary. They indicate that the higher levels of stress led to higher purchase of alcoholic beverages in all phases of the pandemic. This is accordant, as indulging in alcohol is seen as a way of de-stressing. The millennials believed that alcohol could serve as a de-stressing mechanism when they were hearing frightening and scary accounts of COVID-19 in the media on a daily basis. Millennials’ in both countries felt that purchasing alcohol before, during and after the pandemic could ease their stress and lighten their burden in these COVID-19 times. The millennials’ in SA who reported buying alcohol during lockdown stage 4 and 5 could have done so illegally.

RECOMMENDATIONS

A recommendation is that marketers’ use the information provided in the study to understand how fear and stress impact on millennials’ buying patterns during COVID-19. Marketers’ should also focus their attention on how fear and stress are driving the sales of PPEs. PPEs, mostly masks and gloves, are very popular and in high demand in the world during the pandemic. PPEs, masks and hand sanitisers prevent the spread of COVID-19. They are essential products purchased by millennials.

A basic survivalist instinct propels millennials towards purchasing more of these essential products. Marketers can learn from this study and understand how to categorise essential products and develop reliable supply chain channels to ensure their timeous availability and supply during a pandemic or health crisis. PPEs are highly valued goods, and stores should maintain high supplies of these goods during such periods.

Alcohol sales were low during the COVID-19 period. Marketers should recognise that millennials looked at what products could keep them healthy and protect them during the pandemic and these were priority purchases. SA banned alcohol sales, and marketers’ need to address concerns on what products to market during a pandemic. They should also reflect on bans and restrictions placed on products during a pandemic so that they can prepare in advance for such events. Alcohol has also been viewed as a buffer used by people to reduce stress. This can reassure marketers' that even during a health crisis or pandemic millennials, would buy alcohol, even illegally. Marketers' should learn to anticipate in time when bans can be placed on alcohol so that alcohol stocks are present before restrictions and when restrictions are lifted.

Food was an essential item required during a pandemic by millennials. Mass purchasing behaviour was high, as millennials were afraid about possible food restrictions placed on certain imported foods and stockpiled on these foods. Millennials' were also fearful of contracting the virus during shopping, so they bought in bulk to ensure that they had enough rations to survive on over a long period. Marketers' can learn from this, and make sure that during a pandemic or health crisis, shelves in stores should be well stocked with food. Good supplier networks need to be in place during a pandemic to ensure the steady supply of food within retail stores.

Since fear about contacting the virus during shopping, is a significant concern by millennials, marketers should provide this techno-savvy market segment with more online shopping options. Germany is a developed country and has more excellent online options in comparison to SA. Retail outlets in SA have a duty and obligation to move onto digital platforms to increase their sales during a health crisis or pandemic situation.

CONCLUSION

The millennial market segment is an exciting segment with a very high buying power potential. It is imperative that marketers gain more advanced knowledge about millennials and their perceptions, needs and buying patterns in the global marketplace. During COVID-19, marketing information gathered on the consumer behaviour and buying habits of millennials, who are a very active and dynamic market segment, can be very advantageous for a marketer. The marketer is in a favourable position, as a pandemic of this magnitude is a new phenomenon. Having crucial information on this segment provides a competitive advantage for the firm. Keeping abreast of the needs of the millennials' and what drives them, can be instrumental in winning over their customer loyalty in the marketplace-thus resulting in satisfied customers, as well as higher financial returns for the company or retail outlet.

REFERENCES

Aliperti, G. & Cruz, A.M. 2019. 'Investigating tourists' risk information processing', Annals of Tourism Research, 79(1): 1-18. Bachelor,

L. 2020. MPs in plea to government over UK's Covid-19 stockpiling. The Guardian, 21 March. Available from: https://www.theguardian.com/world/2020/mar/21/mps-plea-government-uk-covid-19-stockpiling-coronavirus (Accessed 27 November 2020).

BBC News Australia. 2020a. Coronavirus: Panic buying Australians clear supermarket shelves, BBC News Australia, 2 March, Available from: https://www.bbc.com/news/av/world-australia-51702409 (Accessed 27 November 2020).

BIZCOMMUNITY. 2018. 5 Expectations of the African millennial consumer, 19 July, Available from: https://www.bizcommunity.africa/Article/410/458/179653.html (Accessed 27 November 2020).

Bougie, R. & Sekaran, U. 2019. Research methods for business: A skill building approach. Eighth Edition. Chichester: Wiley.

Chronison, M. 2012. Dissecting the LSM 7-10 market, 18 December, Available from: https://themediaonline.co.za/2012/12/dissecting-the-lsm-7-10-market/ (Accessed 27 November 2020).

Creswell, J.W. & Creswell, J.D. 2018. Research design: Qualitative, quantitative, and mixed methods approaches. Fifth Edition. Thousand Oaks, CA: SAGE.

DeChane, D.J. 2014. 'How to Explain the Millennial Generation? Understand the Context', Sociology Journal, 6(3): 1-3.

Dobbelstein, T; Mason, R.B. & Kamwendo, A. 2020. 'Consumer perceptions of critical success factors for small local consumer brands', Studia Universitatis Babes-Bolyai Oeconomica, 65(2): 65-89.

Elmore, C. 2017. Irma: Frenzied buying in Palm Beach, St. Lucie regions led state. The Palm Beach Post, 15 September, Available from: https://www.palmbeachpost.com/business/data-firm-tracked-how-hurricane-irma-store-sales-boomed- went-bust/LIDVXIL3qlqJGLlaosfSiL/ (Accessed 27 November 2020).

Ferguson, R. 2012. Born This Way: The US Millennial Loyalty Survey How Generation Y Will Reshape Customer Loyalty. Available from: Born This Way: Millennial Loyalty Survey (slideshare.net) (Accessed 27 November 2020).

Furlow, N.E. 2012. 'Find us on Facebook: How Cause Marketing Has Embraced Social Media', Journal of Marketing Development & Competitiveness, 5(6): 61-64. Available from http://na-businesspress.homestead.com/JMDC/FurlowWeb5-6.pdf (Accessed 27 November 2020).

Gerzema, J. & D'Antonio, M. 2011. Spend shift: How the post- crisis values revolution is changing the way we buy, sell and live. San Francisco, CA: Jossey-Bass.

Hair, J.F. Jr., Black, W.C., Babin, B.J. & Anderson, R.E. 2010. Multivariate Data Analysis. Seventh Edition. Upper Saddle River, NJ: Pearson Prentice Hall.

Hall, M.C., Prayag, G., Fieger, P. & Dyason, D. 2020. 'Beyond panic buying: consumption displacement and COVID-19', Journal of Service Management, Vol. ahead-of-print No. ahead-of-print. Available from: https://doi.org/10.1108/JOSM-05-2020-0151 (Accessed 27 November 2020).

Hawkins, D. & Mothersbaugh, D. 2010. Consumer Behavior. Building Marketing Strategy. Eleventh Edition. New York: McGraw Hill Irwin.

Henseler, C. 2012. Generation X goes global: Mapping a youth culture in motion. New York: Routledge.

Holmes, L. 2015. 7 Consumer Types for Successful Targeted Marketing, Euromonitor International. Available from: https://go.euromonitor.com/white-paper-7-consumer-types-for-successful-targeted-marketing.html (Accessed 27 November 2020).

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X. & Cheng, Z. 2020. 'Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China', Lancet, 395(10223): 497-506. Available from: DOI: https://doi.org/10.1016/S0140-6736(20)30183-5 (Accessed 27 November 2020).

Kim, Y.-K. 2002. 'Consumer value: An application to mall and Internet shopping', International Journal of Retail & Distribution Management, 30(11/12): 595-602.

Larson, L.R.L. & Shin; H. 2018. 'Fear During Natural Disaster: Its Impact on Perceptions of Shopping Convenience and Shopping Behavior', Services Marketing Quarterly, 39(4): 293-309.

Lee, N. & Kotler, P. 2016. Social Marketing: Changing Behaviors for Good. Fifth Edition. Thousand Oaks, CA: SAGE.

Loxton, M., Truskett, R., Scarf, B., Sindone, L., Baldry, G. & Zhao, Y. 2020. 'Consumer Behaviour during Crises: Preliminary Research on How Coronavirus Has Manifested Consumer Panic Buying, Herd Mentality, Changing Discretionary Spending and the Role of the Media in Influencing Behaviour', Journal of Risk & Financial Management, 13(8): 1-21. Available from: DOI: 10.3390/jrfm13080166. (Accessed 27 November 2020).

Mason, R.B., Dobbelstein, T. & Corbishley, K.M. 2019. ‚A comparative investigation into the changing use of shopping malls in Germany and South Africa', Journal of Business and Retail Management Research (JBRMR), 13(4): 61-78.

Mehta, S., Saxena, T. & Purohit, N. 2020. 'The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient?', Journal of Health Management, 22(2): 291-301.

Meierhans, J. 2020b. Coronavirus: What are independent supermarkets doing to help? BBC News England, 19 March, Available from: https://www.bbc.co.uk/news/uk-england-51947391 (Accessed 27 November 2020).

Moreno, F.M., Lafuente, J.G., Carreón, F.Á. & Moreno, S.M. 2017. 'The Characterization of the Millennials and Their Buying Behavior', International Journal of Marketing Studies, 9(5): 135-144. Available from: https://doi.org/10.5539/ ijms.v9n5p135 (Accessed 27 November 2020).

Raphelson, S. 2014. From GIs To Gen Z (Or Is It IGen?): How Generations Get Nicknames, NPR, 6 October. Available from: http://www.npr.org/2014/10/06/349316543/don-t-label-me-origins-ofgenerational-names-and-why-we-use-them (Accessed 27 November 2020).

Robert Koch Institute. 2020. Ergänzung zum Nationalen Pandemieplan – COVID-19 – neuartige Coronaviruserkrankung. Available from: https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Ergaenzung_Pandemieplan_Covid. pdf?blob=publicationFile (Accessed 27 November 2020).

Stokes, B. 2015. Who are Europe’s Millennials? Pew Research, 9 February. Available from: https://www.pewresearch.org/fact-tank/2015/02/09/who-are-europes-millennials/ (Accessed 27 November 2020).

Tannenbaum, M.B., Hepler, J., Zimmerman,R.S., Saul, L., Jacobs, S., Wilson, K. & Albarracin, D. 2015. ‘Appealing to fear: A Meta-Analysis of Fear Appeal Effectiveness and Theories’, Psychological Bulletin, 141(6): 1178-1204.

Taylor, S. 2019. The Psychology of Pandemics: Preparing for the Next Global Outbreak of Infectious Disease. Newcastle: Cambridge Scholars Publishing.

Tsao, W. & Chang, H. 2020. ‘Exploring the impact of personality traits on online shopping behaviour’, African Journal of Business Management, 4(9): 1800-1812.

Upton, E. & Nuttall, W.J. 2014. ,Fuel Panics: Insights from Spatial Agent-based Simulation’, IEEE Transactions on Intelligent Transportation Systems, 15(4): 1499-1509.

Vinerean, A. 2013. ‘The Influence of Hedonic and Utilitarian Motivators on Likelihood to Buy a Tourism Package’, Expert Journal of Marketing, 1(1) :28-37.

Wen, X., Sun, S., Li, L., He, Q. & Tsai, F.S. 2019. ‘Avian Influenza—Factors Affecting Consumers’ Purchase Intentions toward Poultry Products’, International Journal of Environmental Resources Public Health, 16(1): 1-13.

Yoon, J., Narasimhan, R. & Kim, M.K. 2018. ‘Retailer’s sourcing strategy under consumer stockpiling in anticipation of supply disruptions’, International Journal of Production Research, 56(1): 3615-3535.

Yuen, K F., Wang,Y., Ma,F. & Li, K.X. 2020. ‘The psychological causes of panic buying following a health crisis’. International Journal of Environmental Research and Public Health. 17(3513): 1-14. Available from: https://doi.org/10.3390/ ijerph17103513 (Accessed 27 November 2020).

ACKNOWLEDGEMENT

Thank you to the Zentrum für Empirische Kommunikationsforschung for funding the project.

The COVID-19-pandemic and implications for businesses: Innovative retail marketing viewpoint

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ABSTRACT

Academic discourse has given much attention to crisis management, a logical trend given that crises have profound implications on businesses and on consumers' behaviour. A core premise that has featured prominently, and indeed remains a core research interest, is public health-related crisis. Underpinned on that business and consumers' behaviour implication foundation, this study aims to contribute to the public health crisis management literature, albeit from a retail marketing purview. Specifically, this study examines the business implications of the Corona-Virus-Pandemic that has paralysed the global economy. To do that, the authors utilise a literature review approach to understand the pandemic containment strategies and economic impacts (including implications for businesses).

The authors invoke leadership (including infrastructure) and strategic and pro-active marketing theories to propose a retail marketing approach that would enable businesses as well as customers effectively contain the movement restriction implications of such pandemic in the future. The authors contend that the leadership approach and the extent and operational modus of infrastructures significantly condition the response effectiveness, impact on business and the economic recovery timescale. To conclude, the limitations of this study are acknowledged. Also, useful directions for progressing knowledge about public health crisis management and retail marketing are flagged.

INTRODUCTION

The critical importance of crisis management has been echoed in academic discourse (e.g. Bundy, Pfarrer, Short & Coombs, 2017; Reeves, Lang & Carlsson-Szlezak, 2020; Senbeto & Hon, 2020). This criticality is justified given that crises have profound implications on businesses and on consumers' behaviour (e.g. Senbeto & Hon, 2020; Lado-Sestayo, Vivel-Búa, & Otero-González, 2016). Within the discourse, a central premise that has received prominent attention recently, and remains a core research interest is public health related crisis (e.g. Senbeto & Hon, 2020; Reeves et al, 2020). Concurring to aforementioned business and consumers' behaviour implication foundation, this study seeks to contribute to crisis management literature from a marketing perspective.

Without doubt, the Corona-Virus-Pandemic exerted paralytic implications on the global business community, leading to huge economic downturn and unprecedented levels of unemployment (see Section 2.1 and sub-sections). For businesses, the Corona-Pandemic induced challenges have reminded of the pertinence for businesses to endorse pro-active and innovative marketing strategies. Embracing such marketing orientation would enable businesses to not only access larger market segments including also breaking into new markets (Opute, 2020a) but also offset natural disaster related crisis and challenges that may cripple mobility. For the consumers, such marketing strategies offer benefits, as their ability to obtain needed supplies is enhanced despite mobility restrictions. Premised in this pro-active and innovative marketing strategies thinking, this paper proposes a retail marketing approach towards addressing natural and health-related crises that impair mobility and place distribution.

Specifically, this study examines the business implications of the Corona-Virus-Pandemic that has paralysed the global economy. To do that, the authors analyse literature to understand the economic impacts (including implications for businesses) of the pandemic and the economic recovery patterns. In understanding the Corona Pandemic impact on businesses, the authors underline the importance of effective and pro-active leadership. The authors contend that the leadership approach and the extent and operational modus of infrastructures significantly condition the response effectiveness, impact on business and the economic recovery timescale. Taking a retail marketing approach in this paper, the authors illuminate the retail marketing implications of the Covid-19 pandemic. Human nature has witnessed different forms of health crises, and to believe that Covid-19 may be the last of such health crises would be unimaginable. That in mind, the authors propose a retail marketing model that would enable a sustained effective response to health crisis induced economic shocks in the future. Towards achieving the required sustainability impact, the authors underline the importance for a strong and effective leadership. Within the leadership perspective for this study, the authors also recognise the criticality for facilitating infrastructures. Thus, the authors recognise that consumers engage in decision making in their preference formation and emphasise the importance of a marketing and brand strategy.

This paper is progressed thus: First, the authors explain the Covid-19 pandemic, highlighting some facts about selected countries. Following that, the authors highlight the implications on economies and business segments. To conclude that section, the implications for retail marketing are flagged. Thereafter, retail marketing, and leadership theories are introduced. In the concluding section of this paper, the authors propose a leadership and infrastructure (marketing and brand strategy) model for achieving a sustained effective retail marketing response and recovery from such health crisis induced challenges in the future. Finally, the limitations of this study are acknowledged, and future research directions flagged.

THE THEORETICAL FRAMING

Natural disaster crises (including health disaster crises, which is the underlying scenario for this study) have been a constituent part of human nature. Unlike past health crisis episodes, for example, Ebola virus, Middle East respiratory syndrome - MERS, HIV, to mention a few, Corona Virus (Covid-19) exerted immense global economic damage. More precisely analysed, the Corona pandemic has massively disrupted the financial markets globally, paralysed global economies and caused unprecedented levels of unemployment globally. Globally, businesses are still struggling to find ways of containing the Covid-19 implications and getting back to full economic activity. Building on leadership theory, this paper proposes innovative retail marketing strategy that would enable organisations thrive and effectively meet the needs of customers even in highly challenging health crises where mobility may be restricted. The theoretical framing of this paper covers four themes: (1) Covid-19 and implications on businesses; (2) leadership theory; (3) retail marketing; and (4) strategic marketing and innovation.

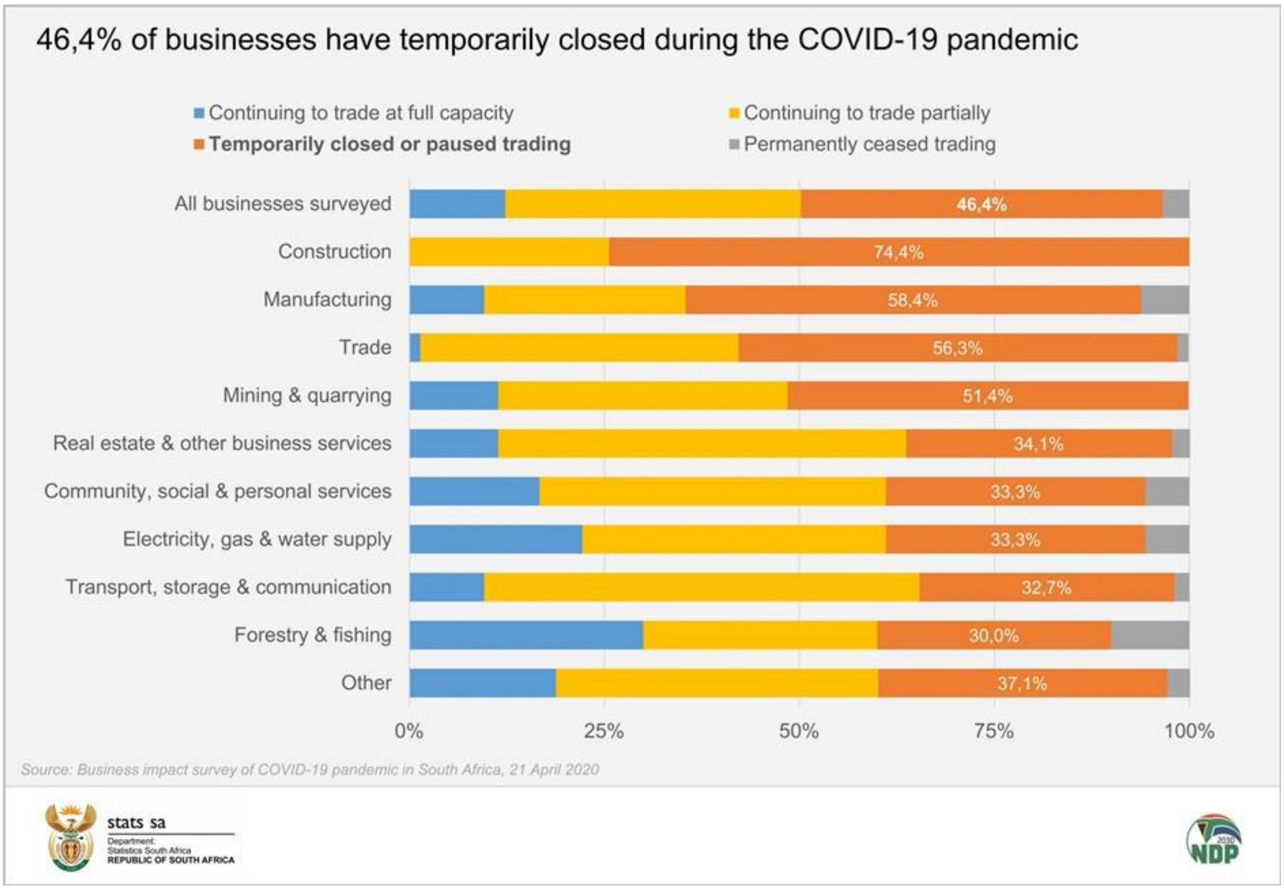
The Consequences of COVID-19 on Economies and Businesses

Based on facts from two countries - South Africa and Nigeria (convenience sampling induced), the authors highlight some of the economic and business settings implications of Covid-19.

Covid-19 Pandemic and the South African Economy and Businesses

Coronavirus pandemic has become the biggest threat to the global economy and if effective containment is not achieved soon may have a recessionary outcome for economies. The economic, financial, and social systems of most countries have witnessed major paralytic consequences. South Africa for example had a fair share of the effect of changes in the economic and business landscape, and the first containment response to the Covid-19 pandemic was the imposition of a lockdown from midnight 26 March 2020 (www.gov.za). A direct consequence of the lockdown strategy is a shutdown of businesses except for essential services, leading to an unprecedented disruption of commerce in most sectors. Most businesses had to close operations with only a few operating at a bare minimum. Figure 2.1 shows the operational impact of the lockdown strategy on businesses.

FIGURE 1
TRADING STATUS OF BUSINESSES



Source: Statistics South Africa (2020)

Mining and agriculture - primary sectors of the South African economy (Nicola, Alsafi, Sohrabi, Kerwan, Al-Jabir, Iosifidis, Agha & Agha,, 2020), suffered major impairment as a result of the Covid-19 pandemic, with mining operations either halted completely or reduced to very low production and distribution processes with the majority of the employees forced to stay at home. As at the time this study was conducted, companies such as Sibanye-Stillwater's and Impala Platinum reported a 60% loss in share price respectively, and Anglo American 40% (African Mining, 2020). Similarly, the resilience of the agricultural sector has been tested by the pandemic. The sector is vast in its products for both local consumption and exportation. The mobility restrictions affected businesses such as restaurants as they could not operate at full capacity, leading to a significant drop in the domestic market demand of the agricultural products (theafricareport, 2020).

The manufacturing sector is one of the most affected sectors in South Africa. The global disruption in the supply chain as a result of Covid-19 induced movement restrictions caused a decline in the exportation of commodities. For example, the automobile industry which accounts for a significant portion of the manufacturing activity and a major employment source recorded a substantial decrease in production volumes and demand. As documented in the March 2020 report, the local market recorded a 30% drop in vehicle sales and a 21.5% drop in export sales compared to same period in 2019 (Engineering News, 2020).

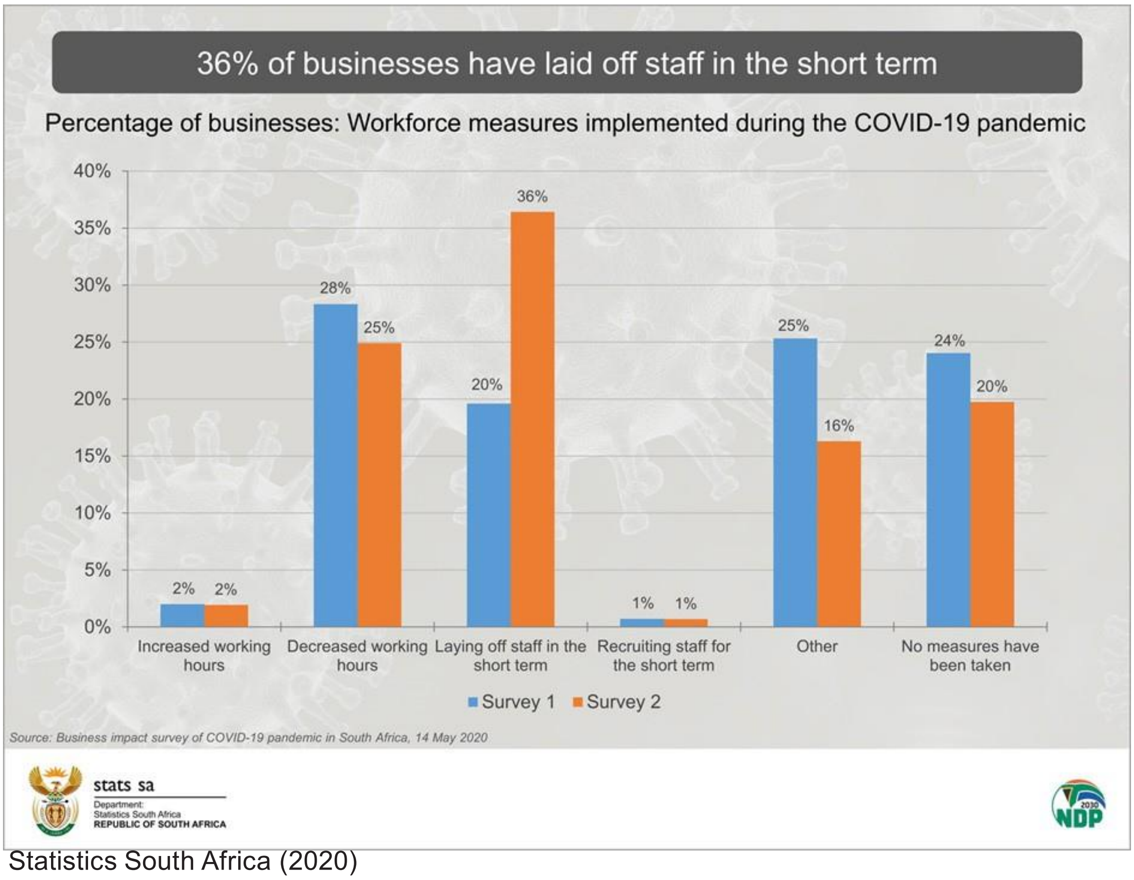
The world-wide lockdown strategy to contain the coronavirus pandemic had vast consequences for the aviation, tourism, and hospitality industries. Most airlines around the globe ceased operation, while a few maintained skeletal strategic operations related to cargoes of essential products. Fin24 (2020) reports that, with fleets of airlines grounded, and all ports of entry closed, the South African tourism industry lost billions in revenue, a consequence of which is 40,000 job losses. Other industries such as retail, agriculture, and transportation and logistics have been indirectly affected with loss in revenue.

Similarly, the ICT and telecommunications industry has been severely affected by the Covid-19 pandemic. The initial closure and suspension of operations by the technology companies (e.g. Amazon, Apple, Samsung, Google, etc.) in China, impacted the South African ICT and telecommunications market. With China harbouring the manufacturing hubs of these technology giants, and the associated travel restrictions, supply chain distribution of product offerings and development initiatives were massively impaired (ITWeb, 2020).

The South African financial institutions have also been affected by Covid-19 and are still struggling to find ways of absorbing the economic shock. According to CNBC Africa (2020), the imposition of national lockdown as a containment tool has caused major financial distress for many businesses. The financial distress substance has also been reinforced in a recent survey undertaken by StatsSA: 85.4% of the businesses surveyed recorded turnover below their normal range with poor trading status (Stats SA, 2020).

A direct consequence of businesses shutting down or operating at a bare minimum, owing to the mobility restriction containment strategy, is the laying off of employees (see Figure 2).

FIGURE 2
IMPLICATIONS OF COVID-19 ON WORKFORCE



Source: Statistics South Africa (2020)

The Economic and Business Implications of COVID-19 in Nigeria

As commented by Jackson, Weiss, Schwarzenberg & Nelson (2020), the Covid-19 pandemic affected global economic growth beyond anything experienced in human history. Africa's most populated country - Nigeria has also been hard hit in several ways by the Covid-19 pandemic. The health implications were devastating with many deaths, as the medical care system, which was already broken and overstretched and lacking the capacity to meet the medical needs of the population, had a huge challenge in providing Medicare for Covid-19 infected patients let alone put appropriate containment plan in place.

While the immediate health impact is still evolving, the beyond health consequences are felt heavily by the populace. The Covid-19 pandemic has caused major economic problems in Nigeria leading to loss of income and livelihood, looming debt crisis, amongst others (United Nations, 2020, p.2). Prior to the pandemic, Nigeria's economy was gradually recovering from the 2016 recession, however per capita incomes were still declining (World Bank 2020). In all, the Covid-19 pandemic exerted major effects on businesses and the economy culminating in deepened unemployment, redundancy, massive job losses and hindrances in the discharge of government activities and responsibilities. The devastating effect of Covid-19 pandemic was felt across all sectors of the economy (see Table 1).

TABLE 1
SHOWS THE IMPACT OF COVID-19 ON KEY ECONOMIC SECTORS IN NIGERIA

Major Economic Activity	Exposure to COVID-19	Level of employment (000's)	Share in total employment (%)	Share of male (%)	Share of female (%)	Employed workers (%)	Self employed workers (%)	Unpaid household workers (%)
Education	Low	2,523	4.3	49.3	50.7	17.1	1.0	1.4
Human Health and Social Services	Low	1,974	3.3	38.3	61.7	13.5	0.5	3.4
Administrative and Support Services	Low	434	0.7	81.6	18.4	2.4	0.3	0.3
Electricity, Gas, Steam & Air Conditioning Supply	Low	7	0.0	100.0	0.0	0.0	0.0	0.0
Water Supply, Sewerage, Waste Management & Remediation	Low	84	0.1	80.1	19.9	0.4	0.1	0.0
Agriculture	Low - medium	32,358	54.7	74.5	25.5	20.0	61.9	79.9
Construction	Medim	1,614	2.7	98.0	2.0	6.4	1.9	0.3
Financial and Insurance	Medium	884	1.5	64.3	35.7	6.8	0.1	0.2
Mining and Quarrying	Medium	112	0.2	92.2	7.8	0.2	0.2	0.0
Arts, Entertainment and Recreation	Medium - high	445	0.8	81.0	19.0	3.4	0.1	0.0
Transportation and Storage	Medium - high	2,390	4.0	99.0	1.0	7.2	3.5	0.4
Information and Communication	Medium - high	388	0.7	78.5	21.5	2.5	0.2	0.0
Accommodation and Food Services	High	935	1.6	12.3	87.7	0.2	1.9	2.3
Real Estate	High	66	0.1	96.1	3.9	0.0	0.2	0.0
Manufacturing	High	4,922	8.3	61.1	38.9	8.2	8.5	6.5
Trade	High	10,015	16.9	35.9	64.1	11.9	19.6	5.1

Source: Nigerian authorities, ILO, and World Bank estimates. Notes: (1) Economic activities excludes professional, scientific, and technical services and other services; (2) level of COVID-19 risk adapted from ILO Monitor 2nd edition: "COVID-19 and the World of Work".

Due to the Covid-19 crisis, many countries globally risk becoming economically insecure. According to Jackson et al (2020), the economic fall-out from the pandemic raises the risks of a global economic recession with levels of unemployment not experienced since the Great Depression of 1930s. The severity of the impact of Covid-19 on the Nigerian economy is further emphasised in the World Bank's (2020) estimate that the poverty rate in Nigeria would increase significantly, leading to 6million additional people joining the poverty circle by 2022.

From the above, it is evident that Covid-19 had major implications for the global economy, as lockdown was enforced leading to restriction of movement of people and goods. Due to the lockdown measures, supply networks were disrupted, and production activities were largely stopped. As a consequence, too, consumers could not source food supply for their daily upkeep, nor engage in their employment tasks - thus their means of livelihood was more or less taken from them. This study proposes that with appropriate digital retail marketing strategy, organisations would be better situated to absorb the shocks arising from such pandemic induced movement restriction and also effectively serve their market segments (customers).

Next, the underlying theories (leadership, retail marketing and strategic marketing and innovation) of the conceptual proposition of this paper are explained.

Leadership Theory

Crisis, with structural implications, can either make or mar the reputation, success, and survival of an organization (Preda & Stan, 2016). Effectively managing crisis requires that leaders respond with the right attitude and vision to navigate the organisation out of the situation. Extant studies distil various leadership forms: participative, transformative and transactional leadership styles (Alkharabsheh, Ahmad & Kharabsheh, 2013; Vera & Crossan, 2004; Zohar & Luria 2004). It is not intended in this paper to dwell on the aforementioned leadership categorisation, rather the focus is to underline the importance of a strong and committed leadership towards enabling organisation to successfully navigate through crises induced challenges. The authors forward a leadership perspective that draws on contingency lens to explain how organizations can innovatively remain competitive during a time of crisis.

Contingency Theory

Crisis comes with social, cultural and economic consequences at both micro and macro levels (Preda & Stan, 2016). Consequences such as increased poverty and inequalities are usually the outcomes of crisis such as Covid-19 (United Nations Development Programme, n.d). To effectively respond to such pandemic crisis, nations and organizations must have a good leadership drive (Preda & Stan, 2016; Nyenswah, Engineer & Peters, 2016). According to Alkharabsheh, Ahmad, & Kharabsheh (2013), the nature of crisis determines the leadership approach and rational decisions. Thus, ensuring a strategic and responsive leadership approach is a critical navigation factor in such pandemic times.

Leadership scholars contend that transformational and transactional leadership styles are critical management tools in times of crisis (e.g. Alkharabsheh, Ahmad & Kharabsheh, 2013; Zohar & Luria, 2004). That contention may draw its plausibility from the way these leadership styles are enforced: transformational leadership style inspires and motivate followers, while transactional leadership focuses on organization, teamwork and supervision; leadership features that would aid effective crisis management. However, the fit of any leadership strategy would depend on the dynamics of the crisis (Vera & Crossan, 2004). That notion is supported by recent literature (Nyenswah, Engineer & Peters, 2016). Forwarding a contingency leadership approach for effectively managing in a period of crisis, Nyenswah et al (2016) examined the Ebola virus disease outbreak in Liberia. They noted that different leadership styles were adopted at each of the four situations of the crisis (crisis recognition and early mobilization, emergency phase, declining epidemic phase and lastly the long tail.

Recognising that there is no single best fit leadership strategy for effectively responding to all crisis situations, we embrace the contingency logic and suggest a leadership approach that embraces pro-active and innovative marketing foundation (e.g. Opute 2020a; Opute, Irene & Iwu, 2020) towards achieving effective retail marketing response to the

Covid-19 crisis. Taking into consideration the peculiar dynamics of Covid-19 (for example, lockdown and extended implications), the authors forward a leadership viewpoint that recognises the need for a strategic marketing orientation that would enable organisations ensure a retail marketing strategy for not only effectively absorbing the economic shocks associated with such pandemic-induced lockdown but also effectively meeting the customers' needs.

Retail Marketing

Retail Marketing during and after the COVID-19 Crisis

More than ever before, the COVID-19 pandemic which has engulfed the global economy like a wild fire will shape the nature of retail marketing. The retail industry is one of the service sectors hard hit by the pandemic (Fernandes, 2020). Current strategic plans have been rendered useless but the need for planning has become even more important as retailers across the world battle to come up with survival strategies. The closure of national borders, the restriction to the movement of people and goods, re-alignment and re-prioritisation of budgets, the isolation and quarantining of huge numbers of people and the requirements of social distancing are and will continue to have profound implications for the retail landscape. Fernandes (2020) estimates that in China retail sales fell by as much as 20% during the first three months of the pandemic, while a 20-30% reduction in consumer spending since the advent of the pandemic was reported in Italy (WRC: 2020). Looking ahead, COVID-19 pandemic will have a lasting impact on how retailers run their businesses and how they engage with customers, suppliers and other stakeholders.

By its very nature of connecting people to products and services, retailing has found itself at the epicenter of the COVID-19 crisis especially considering the sudden jump in e-commerce transactions, retailers having to learn and adapt to the changing global market with incredible speed and skill in order to ensure that supermarket shelves are not empty and consumers continue to have uninterrupted access to goods and services (World Retail Congress (WRC), 2020).

Given that the effects of the pandemic will continue to be felt in the coming years, it is imperative for retailers to learn quickly to find ways to swiftly adapt and survive the challenges of the pandemic. Essentially, the pandemic brings both challenges and opportunities for retailers. Not only has it affected retail marketers, other stakeholders that retail marketers deal with, from employees and employers, to key stakeholders such as customers, suppliers, competitors and society at large have not been spared. This review will focus on how retailers could learn and adapt to the challenges posed by COVID-19 crisis from a retail marketing mix perspective.

The Retail Marketing Mix

Blut, Teller & Floh (2018) elucidate that the retail marketing mix enables retailers to establish a close relationship with their customers. The retail marketing mix includes all mechanics in a retailer's process of goods and services offer to the consumers and also all the programmed efforts of the managers that adapt the store to the market environment (Lazer & Kelley, 1961). Berman & Evans (2010) add that the retail marketing mix consists of internal factors that are controlled by managers in order to establish and sustain retail patronage and influence the short- and long-term performance of retail organisations in terms of sales, profits, and return on investment.

The components of the retail marketing mix have been the subject of debate in academic literature (Hansen, 1990; Blut et al., 2018). Reference has been made to the traditional marketing mix which is composed of the 4Ps (Product, Place, Price and Promotion) (McCarthy, 1964). Further literature categorises nine (Hansen, 1990), ten (Berekoven, 1995) and six (Müller-Hagedorn, 2005) elements of the retail marketing mix. In another conceptualisation, Barth (1999) posited that the retail marketing mix consists of only three elements namely service delivery, remuneration and consumer influence. Azeem & Sharma (2015) note that retail marketing includes some additional, distinctive aspects that the traditional marketing mix does not address. In a study that seemingly supports that claim, Blut et al (2018) suggest 24 retail-related instruments and these include marketing aspects such as the product range, pricing, distribution, incentives and online retailing. Despite the aforementioned developments, it must be emphasised that the expanded marketing mix which extended the traditional marketing mix by adding people, process and physical evidence to the 4Ps remains the most documented in retail marketing literature, hence the 7Ps viewpoint is embraced in this review.

Product

The challenge of retail marketing during the COVID-19 crisis and beyond is to ensure that businesses produce the “right” products to meet customer needs. The core business of retailers is to provide the market with the right products at the right time, right price, right place, right quantity and right quality (Berman & Evans, 2010). The pandemic has hugely disrupted retailers’ ability to deliver on their core businesses. Pantanoa, Pizzib, Scarpib, & Dennis (2020) elucidate that since the advent of the pandemic, consumers have exhibited a stockpiling behaviour which is different from their usual shopping behaviour thereby leading to a huge spike in demand for some products and failure by some retailers to supply the required goods and services.

Price

The price represents the value that retailers attach to their products and services. From the customers’ perspective, the price denotes the value customers are willing and able to exchange for the products and services that retailers offer. The disruption of the global supply chain and subsequent unavailability of some products has had an influence on consumers’ price sensitivity with some consumers willing and able to accept price increases of even up to 300% for certain emergency products such as masks and sanitisers (Pantanoa et al, 2020). Much as some retailers have made huge losses as a result of reduced demand, others have made billions in profits as a result of a huge spike in demand of certain products, especially food items and PPE.

Promotion

The need for efficient and effective communication has been brought to the fore as a result of the pandemic. Retail marketers need to make sure that all their stakeholders are kept informed about the pandemic and how it will impact on the availability of their preferred products and services. The pandemic demands that retail marketers communicate relevant, and practical information to their audiences in real time (WRC, 2020). Retail marketers will need to share information about product availability, in-store health and safety so that they protect the well-being of their employees and their customers. This information should be shared across stores and across geographical markets. Efficient on-point communication about product availability across markets will also ameliorate the challenges caused by panic buying and stabilise the supply chain of certain products. Furthermore, there is need for retailers to share knowledge about changes in shopping behaviour during the pandemic (WRC, 2020:5).

Place

The “place” marketing mix element represents distribution and it seeks to ensure that products and services are available to customers at the point of sale, (Blut et al. 2018). The shutdown of some industries including the transport sector in some countries has led to a massive disruption of global supply chains (WRC, 2020). This has led to stock-out situations for some products and increasing demand for others. For instance, the closure of borders and restrictions on exports compel retail marketers to diversify their supplier base, find alternative suppliers and in the particular case of South Africa reduce dependence on Chinese suppliers. Ivanov (2020) notes that panic buying and stockpiling of staples such as rice, pasta and tissues in countries such as South Africa, the United Kingdom and Australia has had a negative impact on the global supply chain. The disruption to the global supply chain and the subsequent stock-outs therefore challenges retail marketers to review their supply chains in order to rationalise them so that they are shorter, agile and responsive to market shocks.

Process

The process element of the expanded marketing mix denotes the steps through which a customer goes in order to access retail goods and services. Government regulations on the movement, congregation and gathering of people has led to the emergence of queues inside and outside of stores. This has thus compelled billions of consumers across the world to start shopping digitally (WRC, 2020) bringing into question the sustainability of brick-n-mortar retailing. Pantano et al (2020) highlight that many customers including the elderly are switching to online purchases, discovering the safety and benefits of home-deliveries, store pick-ups, and cashless payments. Retail marketers therefore need to be prepared for this new normal. WRC (2020) further argues that e-commerce sites such as Amazon and Alibaba, with their advanced logistics and fulfillment capabilities, will be the biggest beneficiaries of the COVID-19 crisis as billions of consumers shift to online shopping to overcome the restrictions brought upon by the crisis.

People

Pantano et al (2020) postulate that COVID-19 has led to a major shift in consumer behaviour with store patronage deterrents such as long waiting times and overcrowding in retail stores. Furthermore, Pantano et al. (2020) note that consumers have become “patient” and are willing to spend time waiting in queues in order to access stores. COVID-19 has also compelled some retailers to introduce innovative social responsibility services such as priority delivery slots for vulnerable or elderly customers in their dealing with special needs customers (Pantano et al., 2020). In some retail stores, the elderly and vulnerable do not stand in queues and they also have access to reserved checkout counters to ensure that they do not spend much time in queues. This also helps to reduce their exposure to multitudes of people and the resultant risk of contracting the COVID-19 virus.

Physical evidence

Physical evidence refers to the environment in which goods and services are provided. Restrictions on the movement of people, requirements for social distancing and the placing of people in quarantine and isolation as a result of COVID-19 has led to a situation where traffic to some retail stores has been fundamentally reduced. Ivanov (2020) notes that panic buying and stock-piling of staples such as rice, pasta and tissues in countries such as South Africa, the United Kingdom and Australia has had a negative impact on the global supply chain as some consumers prepare for the unknown future. The pandemic coupled with government regulations around it have therefore compelled retailers to invest more in infrastructure and other services that seek to ensure the health and safety for store patrons.

Strategic Marketing and Innovation

Day & Montgomery (1997) delineated four fundamental issues that underlie the marketing field, two of which fit within the conceptual motivation for this paper, namely: (1) How do markets function and evolve?, and (2) What are the contributions of marketing to organisational performance and societal welfare? Being conscious of how markets function is essential for retail businesses and the extent to which businesses maintain that consciousness would shape their marketing performance and extendedly organisational performance. From a synthesis of responses of 36 strategic marketing educators, Varadarajan (2015) categorised 8 unique (style, wording and length) yet overlapping responses. In line with the conceptual framing of this study, the authors embrace the view that the strategic marketing field is about “the study of strategies that businesses use to create value for customers” (Varadarajan, 2015, p.80).

Furthermore, based on responses from the same sample, Varadarajan (2015) underlines two fundamental issues to strategic marketing: firm behaviour and firm performance, a conclusion that resonates with the viewpoint of Day & Montgomery (1997). A firm’s behaviour is influenced by its consciousness of how markets function and evolve, and this ultimately would impact organisational performance. Conscious of constant technological evolvement and increasing marketing implications, alongside the Covid-19 pandemic and its paralytic impact on businesses, this study makes a case for business models that are founded on strong strategic marketing drive (e.g. Opute, 2008). A strategic marketing orientation is critical to effective customer orientation and enhanced organisational performance (Opute, 2020a). Bearing in mind that crises could set in, be they natural or health related, that could have paralytic consequences for businesses (such as the ongoing Covid-19 pandemic), the authors argue for a strategic marketing focus which is proactive and leverages technological opportunities to effectively deliver value to customers even in pandemic times.

According to Gartner (2015), Internet of Things (IoT), a strategic technology trend, tremendously impacts business opportunities, and firms would achieve better customer orientation and boost performance, if they utilise the impacting potentials of IoT (Opute et al, 2020). The ‘place’ element of the marketing mix relates to distribution and seeks to ensure that products and services are available to customers at the point of sale, (Blut et al, 2018). At the peak of the Covid-19 pandemic, necessary containment measures had to be enforced, leading not only to the shutdown of some industries including the transport sector in some countries which led to massive disruption of global supply chains (WRC, 2020), as well as lockdown with restricted movement. A severe implication of the latter (lockdown) for consumers is the inability to access food supply due to movement restriction. It is pertinent that strategic marketing initiatives be enforced to secure the target of providing customers with goods and services, hence the authors argue that the point of sale with regards to ‘place’ feature of the marketing mix, should not only be physical but also digital. So, the authors argue that innovative retail marketing processes should be put in place to aid online shopping (e-commerce).

RESEARCH METHODOLOGY

The conceptual premise of this paper is on the impact of crises, such as the ongoing Covid-19 pandemic on societies (economies, businesses and consumers), and a retail model that would effectively eliminate the point of sale consequences for consumers when there is movement restriction. Therefore, this paper, which was based on review of literature, was carefully focused on capturing literature that fits within the conceptual frame. The literature presented in this paper was sourced through databases and websites. Qualitative in nature this study involved the systematic collection, organisation, description and interpretation of textual, verbal or visual data (Hammarberg, Kirkmann & de Lacey, 2016). In an attempt to ensure that appropriate materials were used, the authors made use of a mixture of review methods namely traditional literature review, and document analysis. This process was to ensure a multidimensional perspective on Covid-19-Pandemic and its implications for retail businesses. To offer a wide-ranging overview in this study, the authors gathered and synthesised substantial peer-reviewed articles about corona virus, retail business management, strategic marketing and leadership. Considering the newness of the virus and how it has impacted businesses, the authors thought it best not to narrow our search for articles but instead carry out a detailed, comprehensive search of literature by making use of the traditional literature review method (Jesson, Matheson & Lacey, 2011; Li & Wang, 2018).

For a study of this nature, the authors felt that organisational and institutional documents would be useful. Owing to this, we applied document analysis as part of our review method. Therefore, we consulted institutional websites such as the World Bank, the United Nations, World Health Organisations and several other government agencies’ reports. The authors basically adopted the counsel of Dey (2005) who argues that “… in documentary analysis, the criteria for selecting documents, or for focusing on particular extracts, should reflect the issues on which the researcher is seeking evidence.” With regards to Covid-19 and its impact on the businesses, literature search was specifically limited to publications on South Africa and Nigeria.

RECOMMENDATIONS: LEADERSHIP AND MARKETING STRATEGY MODEL FOR ACHIEVING SUSTAINED EFFECTIVE RETAIL MARKETING RESPONSE AND RECOVERY

The central focus of this study is to forward a retail marketing strategy for effectively responding to crisis situations such as Covid-19 where containment measures such as restriction of movement may be enforced. In line with that focus, the impact of Covid-19 on retail marketing was underlined, as well as the retail marketing mix and Covid-19 implications highlighted in the literature review. Within that focus too, the importance of appropriate leadership strategy that drives a pro-active and innovative strategic marketing orientation that is not only performance enhancement enabling but also enabling customers to conveniently access their needs despite movement restriction was also underlined in the literature review. In this section, the authors offer retail marketing enabling recommendations, pinpointing clearly the leadership, strategic marketing and retail marketing mix tenets, towards mitigating the lockdown implications for businesses as well as customers.

During times of crisis of immense daunting challenges with significant implications for businesses as well as customers, businesses must embrace agile response strategies. This is the underlying rationality for the conceptual premise of this paper. Combining leadership and marketing strategy foundations, this study forwards recommendations for effective retail marketing response and recovery. Taking the Covid-19 pandemic as a focal point, this study forwards a retail marketing strategy that would enable organisations effectively meet the needs of their customers even in health crisis situations where countries and cities are put under strict lockdown. The authors argue that achieving such retail marketing strategy for effectively containing the implications of such health crisis requires a strong leadership that is not only pro-actively driven both also embraces innovative retail marketing strategies. The authors argue that a careful fit-for-purpose strategy is essential towards ensuring effective response. While the proactive measures that lend utility in responding to crisis situations could take different forms, the measure and timeliness of response effectiveness hinge significantly on two major factors: a steady and measured leadership; and a clearly functioning retail infrastructure.

The marketplace is becoming increasingly dynamic and the plausibility of the customers being the king is gaining increasing validity. To compete effectively in such dynamic market landscape, organisations require a suitable retail marketing strategy. In this study, the authors extend that pertinence and argue that organisations aiming to effectively absorb and contain the implications of natural disaster induced crises require a retail marketing strategy that contains initiatives for enabling organisations to effectively absorb and respond to the unfolding challenges. One critical lesson that has been learned through the Covid-19 pandemic is the pertinence for retail marketers to embrace digitalised marketing. Digitalised technologies based marketing, also called e-commerce, which has been defined as “the process of buying, selling, transferring, or exchanging products, services and/or information via computer networks, mostly internet and intranet” (Turban, King, Liang & Turban, 2010:48), has enabled economies like Germany cope more effectively with the movement restriction implications as they had already existing marketing processes that allow customers to place their orders online and their orders are delivered to their door steps. The ‘place’ marketing mix component is no longer physical space specific but could be virtual space based.

The post-COVID-19 retail landscape demands that retail marketers find new ways of identifying and satisfying emerging customer needs (WRC, 2020:9). Retail Marketers need to start visualising and planning for the post-COVID-19 scenario. There is need for retail marketers to come up with business models that are agile and responsive to market shocks. The post-COVID-19 environment will require retailers to shift from a short-term “fire-fighting” mentality to sustainable long-term thinking structured along the need to develop business models that are robust and withstand market shocks and uncertainties.

Digital technologies are increasingly defining daily life dynamics (Opute, 2017). Consequently, for consumers as well as companies, digital technologies are significantly constituting a tool for stimuli response (for the former) (Opute et al, 2020; Belk, 2013; Opute, 2017) as well as delivery of marketing strategy and tracking consumer behaviour (for the latter) (Opute, 2020a+b; Ozuem, Howell & Lancaster, 2008). There is a growing trend of paradigm shift from the point of practice of marketing, especially in securing competitive advantage not only in local (e.g. Opute, 2020) but also in global markets (e.g. Rachinger, Rauter, Müller, Vorraber & Schirgi, 2019; Opute, 2020a; Lobo & White, 2017)

Within that focus of securing competitive advantage, companies may not only leverage the internet and emerging technologies in the products and services delivery to customers, but also in securing strategic engagement with customers (e.g. Opute, 2020b; Ozuem et al, 2008). Leveraging that foundation, this study underlines that retail marketers can, through their effective implementation of e-commerce practice, boost their digital marketing environment, and thereby effectively interact with their customers, capture their products’ or service’s emotions, towards adopting pro-active marketing initiatives to meet their needs, either by ensuring timely and appropriate product (or service) delivery or filling new market needs through product or service innovation (e.g. Opute, 2020a).

Issues around business continuity and innovation will become significantly important in the post Covid-19 period. The post-COVID-19 environment will demand that retailers develop new innovative models to drive business’s capacity to keep their customers, who in the modern-day market landscape are becoming more powerful and could quit at any slight opportunity (Opute, 2017). The importance of the innovative retail marketing strategy has been demonstrated by Grant Pattison, the former boss of Massmart, in the Edcon Group marketing turnaround. Equally important in that innovative retail marketing stride is the pertinence for a pro-active orientation towards creating strategic and creative partnership across different sectors. While the effectiveness of such innovative approach has been documented, for example, Global retailers such as Spar have embraced the concept of joint procurement as a way of overcoming the challenges they are facing in terms of the supply of products to their stores (WRC, 2020:9), this study emphasises the importance for strongly leveraging the digital technology enablement.

Retail marketers need to view the current crisis not as the beginning of the end but more as an opportunity to refocus, rebuild (through innovation) and recover from the crisis. Indeed retail marketers should not only be aiming to recover from the shocks from the Covid-19 pandemic but should be consciously aware of the glaring paradigm shift in marketing practice where the internet and digital technologies are defining the new order. Digitalised marketing will be the norm in a not too distant future. Therefore, to effectively refocus, rebuild and implement adequate strategic and innovative marketing processes that will make the cutting edge, a strong, pro-active, agile and contingency driven leadership approach would be essential. Such leadership qualities would be the key differentiators between marketers that would make the cutting edge and those that would lose out. Pantano et al (2020) note that the COVID-19 crisis will shape and re-shape the relationships that retailers have with their customers. Retail marketers aiming to survive in the new marketing order would need to effectively use digital technologies not only in enabling customers to place their orders through online media, as well as achieving effective and timely delivery to customers, but also in ensuring effective customer engagement towards identifying and meeting customers' needs. Acting swiftly would be a key leadership approach. A fit leadership strategy is required to ensure that suitable and adequate enabling infrastructure is in place, and adequately skilled personnel are positioned at the key points to ensure appropriate data management towards customers' information tracking to understand their nature and time of need, and also use relevant machine learning tools to facilitate strategic customer interaction that can impact revenue positively. Finally, the leadership should focus at orchestrating strategic interactions that facilitate meeting expectations at every stage of the buying journey.

DIRECTIONS FOR FUTURE RESEARCH

This study has forwarded a pro-active and innovative retail marketing strategy that would lend its utility in effectively responding to and minimising the economic implications of the lockdown containment strategy of crisis management on businesses and customers. Beyond that, the forwarded retail marketing strategy would enable businesses to improve their operational dynamics to meet the gradually unfolding new marketing norm. The ongoing Covid-19 pandemic has undoubtedly raised the attention on crisis management, and in particular, crises of the nature that may warrant lockdown strategies. For businesses and customers, crises of such nature would have far-reaching implications. There is a huge research premise here from the point of the implications of Covid-19 on businesses and what strategies businesses as well as customers are embracing to overcome the implications. Multiple directions exist in that regard, from the point of industrial differentiators, geographical differences and government role, amongst others. Future research could be carried out to investigate the level of customer satisfaction with waiting times during the COVID-19 pandemic and how this will influence their shopping behaviour after the pandemic.

REFERENCES

African Mining. (2020). The impact of Covid-19 on the mining sector. 9th, April 2020. Accessed on 12.07.2020 at: http://www.africanmining.co.za/2020/04/09/the-impact-of-covid-19-on-the-mining-sector/

Akanni, L.O. & Gabriel, S.C., (2020). The implication of COVID-19 pandemic on the Nigerian economy: he global health hazards and economic impacts of COVID-19. Centre for the study of the Economies of Africa. Available at cseaafrica. org/the-implication-of-covi19-on-the-nigerian-economy. Accessed 24 July 2020.

Alkharabsheh, A., Ahmad, Z.A. & Kharabsheh, A. (2013). Characteristics of crisis and decision making styles: The mediating role of leadership styles. International Conference on Innovation, Management and Technology Research, Malaysia, 22-23 September, 2013.

Azeem, S. & Sharma, R. R. K. (2015). Elements of the retail marketing mix: a study of different retail formats in India, The Business and Management Review, 5(4).

Barth, K. 1999. Betriebswirtschaftslehre des EH, Fourth Edition, Gabler, Wiesbaden.

Belk, R. W. (2013). Extended self in a digital world. Journal of Consumer Research, 40(3), pp. 477-500.

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis, Nursing Plus Open, 2, pp 8–14.

Berekoven, L. (1995) Erfolgreiches Einzelhandelsmarketing, München: C.H. Beck.

Berman, B., and Joel, R. E. (2010). Retail Management. A Strategic Approach, Upper Saddle River, NJ: Prentice Hall. Bloomberg.

(2020). South African Businesses' Pain from Coronavirus Lockdown in Charts. April 21, 2020. Accessed on 12.07.2020 at: https://www.bloomberg.com/news/articles/2020-04-21/south-african-businesses-pain-from-virus- lockdown-in-charts

Blut, M., Teller, C. & Floh, E. (2018). Testing Retail Marketing-Mix Effects on Patronage: A Meta-Analysis, Journal of Retailing, 94(2), pp.113–135.

Bundy, J., Pfarrer, M. D., Short, C. E. & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. Journal of Management, 43(6), 1661–1692.

Casey, B. H. (2012). The implications of the economic crisis for pensions and pension policy in Europe. Global Social Policy, 12(3), 246–265.

Chen, M. H. (2011). The response of hotel performance to international tourism development and crisis events. International Journal of Hospitality Management, 30(1), 200–212.

Chen, M. H., Jang, S. S. & Kim, W. G. (2007). The impact of the SARS outbreak on Taiwanese hotel stock performance: An event-study approach. International Journal of Hospitality Management, 26(1), 200–212.

Cision PR Newswire. (2020). Sasol's Response to COVID-19 Lock Down in South Africa; Credit Rating and Oil Hedging Update, and Cautionary Statement. Mar 31, 2020. Accessed on 12.07.2020 at: https://www.prnewswire.com/news- releases/sasols-response-to-covid-19-lock-down-in-south-africa-credit-rating-and-oil-hedging-update-and-cautionary- statement-301032301.html

CNBC Africa. (2020). COVID-19: Economic meltdown the price – skills and trade the answer. May 31, 2020. Updated: May 31, 2020. Accessed on 11.07.2020 at: https://www.cnbcafrica.com/insights/2020/05/31/covid-19-economic- meltdown-the-price-skills-and-trade-the-answer/

KPMG. (2020). Covid-19: A business impact series. Consumer retail - cash and the journey past Covid-19. KPMG Report (2020), Issue 8 (I8 May). Accessed on 29.08.2020 at: https://assets.kpmg/content/dam/kpmg/ng/pdf/advisory/kpmg- newsletter-(issue-8)--consumer-retail-cash-and-the-journey-past-covid-19.pdf

Day, G. S. & Montgomery, D. B. (1997). Call for papers. Journal of Marketing, 61(April), 100–101.

Deng, S., Wang, W., & Chao, Y. (2020). Will consumption rebound after the COVID-19 pandemic? 1 A structural equation modelling research based on the psychological arousal theory, PsyArXiv, Accessed on 27.07.2020 at: www.psyarxiv. comApril 2020.

Dey, I. (2005). Qualitative data analysis. London: Routledge.

Engineering News. (2020). New-vehicle sales plummet by 30%. 1 April 2020. Available [Online]. https://www.engineeringnews. co.za/article/new-vehicle-sales-plummet-by-30-2020-04-01

Fernandes, N. (2020). Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy (March 22, 2020). Accessed on 27.07.2020 at: https://ssrn.com/abstract=3557504.

Fin24. (2020). Tourism sector warns of massive job losses if travel only reopens widely by September. Accessed on 10.14.2020 at: https://www.news24.com/fin24/Companies/TravelAndLeisure/tourism-sector-warns-of-massive-job- losses-if-travel-only-reopens-widely-by-september-20200613

Gartner (2015). Gartner says the Internet of things installed base will grow to 26 billion units by 2020. Retrieved May 30, 2019, from https://www.mcit.gov.sa/en/media-center/news/91424

Geospatial World. (2020). How South Africa uses tech to fight Covid-19. 04/21/2020. Accessed on 10.07.2020 at: https://www.geospatialworld.net/blogs/how-south-africa-uses-tech-to-fight-covid-19/

Global Compliance News. (2020). South Africa: The Impact of COVID-19 on Key African Sectors. March 26, 2020. Accessed on 11.07.2020 at: https://globalcompliancenews.com/south-africa-the-impact-of-covid-19-on-key-africian-sectors/

Hammarberg, K., Kirkman, M. & de Lacey, S., 2016. Qualitative research methods: when to use them and how to judge them. Human Reproduction, 31(3), 498-501.

Hansen, T. (2003). Intertype competition: specialty food stores competing with supermarkets. Journal of Retailing and Consumer Services, pp.35–49.

Impact of Covid-19 on the Nigerian consumer and industrial markets. KPMG in Nigeria Report (April 2020). Accessed on 28.08.2020 at: https://assets.kpmg/content/dam/kpmg/ng/pdf/advisory/impact-of-covid-19-on-the-nigerian-consumer- markets-sector.pdf

IOL. (2020). Covid-19 is the push we need to embrace the gig economy. Jun 24, 2020. Accessed on 13.07.2020 at: https://www.iol.co.za/business-report/economy/covid-19-is-the-push-we-need-to-embrace-the-gig-economy-49843926

ITWeb. (2020). Tech sector should brace for drastic coronavirus impact. 03 February 2020. Accessed on 12.07.2020 at: https://www.itweb.co.za/content/mYZRX79Pb2nvOgA8

Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case. Transportation Research Part E: Logistics and Transportation Review, 136.

Jackson, J.K., Weiss, M.A., Schwarzenberg, A.B., & Nelson, R.M., (2020). Global Economic Effects of COVID-19. Congressional Research Service, July 21, 2020. Available at https://crsreports.congress.gov. Accessed 24 July 2020.

Jesson, J., Matheson, L., & Lacey, F. (2011). Doing your literature review: Traditional and systematic approaches. Los Angeles, CA: SAGE.

Jimoh, M.O. (2015). Managing Epidemic: The British Approach to 1918-1919 Influenza. Lagos Journal of Asian and African Studies. SAGE. Doi:10.1177/0021909615587367

KPMG Professional Services (2020). Covid-19: A Business Impact Series. Financial, Tax and Regulatory Considerations to Manage COVID-19 Disruptions. Issue 2, 6 April 2020. Available at https://assets.kpmg/content/dam/kpmg/ng/pdf/ advisory/covid-19-a-business-impact-series.pdf. Accessed 24 July 2020.

Lado-Sestayo, R., Vivel-Búa, M. & Otero-González, L. (2016). Survival in the lodging sector: An analysis at the firm and location levels. International Journal of Hospitality Management, 59, 19–30.

Lazer, W., & Kelly. (1961). The retailing mix: planning and management. Journal of Retailing, 34-41.

Li, S., & Wang, H. (2018). Traditional literature review and research synthesis. In A. Phakiti, P. De Costa, L. Plonsky, & S. Starfield (Eds.), Palgrave handbook of applied linguistics research methodology (pp. 123–144). London: Palgrave.

Lobo, S. & Whyte, J. (2017). Aligning and reconciling: Building project capabilities for digital delivery, Research Policy, 46(1), 93-107.

Mail&Guardian. (2020). Covid-19 leaves SA at the mercy of overseas drug exporters. 25 Mar 2020. Accessed on 12.07.2020 at: https://mg.co.za/article/2020-03-25-covid-19-leaves-sa-at-the-mercy-of-overseas-drug-exporters/

Müller-Hagedorn, L. (1993). Handelsmarketing, 2nd edn, Stuttgart: Kohlhammer.

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. International Journal of Surgery, 78,185–193.

Nyenswah, T., Engineer, C.Y. & Peters, D.H. (2016) Leadership in times of crisis: The example of Ebola Virus Disease in Liberia, Health Systems & Reform, 2(3),194-207.

Ohadike, D.C., (1991). Diffusion and Physiological Responses to the Influenza Pandemic of 1918-19 in Nigeria. Soc.Sci. Med. 32(12), 1393-1399. Africa Studies and Research Centre, Cornell University, Ithaca, New York.

Olapegba, P.O., Ayandele, O., Kolawole, S.O., Oguntayo, R., Gandi, J.C., Dangiwa, A.L., Ottu, I.F.A., & Iorfa, S.K. (2020, April 12). COVID-19 Knowledge and perceptions in Nigeria. PsyArXiv. Elsevier Inc. https://doi.org/10.31234/osf.io/j356x

Olapegba, P.O., Iorfa, S.K., Kolawole, S.O., Oguntayo, R., Gandi, J.C., Ottu, I.F.A., & Ayandele, O., (2020, May 8). Survey data of COVID-19-related Knowledge, Risk Perceptions and Precautionary Behavior among Nigerians. Elsevier Inc. https://doi.org/10.1016/j.dib.2020.105685

Onyekwena, C., & Ekeruche, M.A., (2020). Understanding the impact of the COVID-19 outbreak on the Nigerian economy. The Brookings Institution April 8, 2020, Available at https://www.brookings.edu/blog/africa-in-focus/2020/04/08/understanding-the-impact-of-the-covid-19-outbreak-on-the-nigerian-economy/. Accessed 24 July 2020

Opute, A. P. (2008). The Antecedents of Accounting-Marketing Integration during the Strategic Marketing Process', Proceedings of the 22nd Annual Conference of the Academy of Marketing, November 6 - 8, The Royal Automobile Club, Pall Mall, Westminster (London, UK). ISBN: 978-0-9552685-5-7.

Opute, A. P. (2017). Exploring Personality, Identity and Self-Concept among Young Consumers (Chapter Five), Young Consumer Behaviour: A Research Companion, Routledge (Taylor and Francis). ISBN: 978-0-415-79008-6 (hbk).

Opute, A. P. (2020a). Small and Medium Enterprises Marketing: Innovation and Sustainable Economic Growth Perspective, in Entrepreneurship Marketing: Principles and practice of SME Marketing. Routledge Publishers.

Opute, A. P. (2020b). Teamwork and Customer Service (Chapter 14), in Customer Service Management: A Strategic and Operational Perspective. Taylor and Francis.

Opute, A.P., Irene, B.N. & Iwu, C.G. (2020). Tourism service and digital technologies: A value creation perspective. African Journal of Hospitality, Tourism and Leisure, 9(2). ISSN:223-814X.

Ozuem, W., Howell, K.E. & Lancaster, G. (2008). Communicating in the new interactive marketspace, European Journal of Marketing, 42(9/10), 1059-1083.

Pantanoa, E., Pizzib, G., Scarpib, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. Journal of Business Research 116, 209–213.

Rachinger, M., Rauter, R., Müller, C., Vorraber, W. & Schirgi, E. (2019). Digitalisation and its influence on business model innovation, Journal of Manufacturing Technology Management, 30(8), 1143-1160.

Reddy, V., Soudien, C. & Winnaar, L. D. 2020. Impact of school closures on education outcomes in South Africa. The Conversations. May 5, 2020. Accessed on 12.07.2020 at: https://theconversation.com/impact-of-school-closures-on- education-outcomes-in-south-africa-136889

Reeves, M., Lang, N. & Carlsson-Szlezak, P. (2020). Crisis management: Lead your business through the Corona crisis, Harvard Business Review, Harvard Business School Publishing Corporation.

Ritter, T. & Pedersen, C.L. (2020). Digitisation capability and the digitalisation of business models in business-to-business firms: Past, present, and future, Industrial Marketing Management, 86, 180-190.

Saavedra, J. 2020. Educational challenges and opportunities of the Coronavirus (COVID-19) pandemic. MARCH 30, 2020. WorldBank Blogs. Accessed on 09.07.2020 at: https://blogs.worldbank.org/education/educational-challenges-and-opportunities-covid-19-pandemic

Senbeto, D. L & Hon, A. H. Y (2020). The impacts of social and economic crises on tourist behaviour and expenditure: an evolutionary approach, Current Issues in Tourism, 23:6, 740-755.

Statista (2020 - edited by Mazareanu). Leading European Airlines based on revenue 2018; European Aviation industry. Accessed on 19.05.2020 at: https://www.statista.com/statistics/201067/europes-25-largest-airline-groups-based-on-revenue/

Statista (2020). Death rates from coronavirus (COVID-19) in the United States as of May 4, 2020, by state (per 100,000 people). Accessed on 07.05.2020 at: https://www.statista.com/statistics/1109011/coronavirus-covid19-death-rates- us-by-state/

Statistics South Africa. (2020). Business impact survey of the COVID-19 pandemic in South Africa. Accessed on 09.07.2020 at:

Theafricareport. (2020). South Africa VS Coronavirus: Exports keeping agriculture afloat. Friday, 3 July 2020. Accessed on 10.07.2020.

Turban, E., King, D., Liang, T.P. & Turban, D. (2010). Electronic commerce 2010: a managerial perspective. Upper Saddle River: Pearson Education.

United Nations (2020). Impact of COVID-19 in Africa. Policy Brief: 20 May 2020

Varadarajan, R. (2015) Strategic marketing, marketing strategy and market strategy. Academy of Marketing Science Review, 5, 78–90. DOI 10.1007/s13162-015-0073-9.

World Bank Group (2020). Nigeria in Times of COVID-19: Laying Foundations for a Strong Recovery. Nigeria Development Update June 2020.

World Bank Group (2020). The Global Economic Outlook During the COVID-19 Pandemic: A Changed World. Feature Story June 8, 2020. Available at https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook- during-the-covid-19-pandemic-a-changed-world. Accessed 24 July 2020.NIGERIA

World Retail Congress. (2020). Retailing in a time of crisis. Accessed on 14.07.2020 at: https://www.worldretailcongress.com/congess-content/issue-two-the-retail-world-2020-retailing-in-a-time-of-crisis.

Forecasting the impact of the COVID-19 pandemic on South African trade

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ABSTRACT

The COVID-19 pandemic has caused significant disruption to global economic activity, global supply chains and international trade. Studies forecasting the impact of the COVID-19 pandemic on South African trade are sparse despite an increase in research on the pandemic. We investigated the effect of COVID-19 on South African export and import values by firstly analysing the effect of other past crises on trade using monthly trade data for South Africa for the period January 2005 to July 2020. Before the forecasts, we validated the forecasting power of ARIMA models in the presence of significant swings in trade. Thereafter forecast values for the period August 2020 to July 2022 were computed. Our findings reveal that the COVID-19 pandemic, like other supply chain disruptions of global proportion, will result in the contraction of South African trade. However, the country is more likely to report a positive trade balance. This will contribute to a positive balance of payments and exchange rates during the forecast period. Weak domestic demand may explain the inferior imports against exports predicted between August 2020 and July 2022. Despite the anticipated positive trade balance, weak domestic demand could also weaken the country"s economic growth projections. The forecasts in this study may also be used by policymakers to anticipate tariff revenue from the different regions. It is also imperative for policymakers to advance bilateral trade agreements with Asian, European and African countries, the major export destinations. The African Continental Free Trade Area is a welcome strategy that may boost trade between South Africa and other African countries.

Keywords: Trade forecasting, supply chain disruptions, COVID-19, South Africa

INTRODUCTION

Global supply chains have resulted in global interconnectedness among firms and have become a major source of competitiveness both for individual firms and economies at large (Cantwell, 2017; Contractor et al., 2015). Global supply chains or global value chains are characterised by the “international expansion and geographical fragmentation of contemporary supply chains” (Vandenbussche, Connell & Simons, 2019:2; Gereffi & Lee, 2012: 24). Firms at various stages in the global supply chain specialise in specific competences that the entire chain leverages on to be more competitive compared to individual firms or localised supply chains (Vandenbussche, Connell & Simons, 2019:25). Global supply chains have facilitated the transfer of technology and knowledge facilitated through trade (Kalaitzi, 2018:1). In particular, the proliferation of global trade has resulted in easier access to innovative raw materials, production processes, marketing and after sales strategies (Lamy, 2010; Baldwin & Lopez-Gonzalez, 2015). Firms are now more dependent on global suppliers for intermediate inputs. Intermediate inputs account for 20 to 50 percent of final manufacturing output globally (Blanchard, Bown & Johnson, 2016:5). This is because of globalisation and liberalisation of trade, which have opened markets and increased international trade levels to unprecedented levels (Jenkins, 2018; Siddiqui, 2017:514).

Dependency on trade results in vulnerabilities to disruptions (Lee, 2019:12). Supply chain disruptions are external shocks caused by intentional or unintentional human actions and natural disasters (Ambulkar et al., 2015:111). These disruptions partially or completely negatively impact the inventory levels, contracts and incentives, sourcing decisions, and strategic decisions of the various stakeholders in a supply chain (Snyder et al. 2016). Supply chain disruptions result in supply uncertainty (Begen et al., 2016), increased operational and financial risk (Scheibe & Blackhurst, 2018:43) and a reduction in network reliability (Snyder & Daskin, 2005; Kerivin & Mahjoub, 2005). Developing self-sustaining economies is one approach to mitigating the vulnerability to external shocks (Hosseini et al., 2019:286). However, isolation can be limiting because the interconnectedness and interdependencies among economies brought about by global supply chains cannot be replaced by the internal resource endowments or competencies (WTO & IDE-JETRO 2011: 83-85). Although global trade can result in deficits that are undesirable, the global economy cannot do without international trade (Baldwin & Lopez-Gonzalez, 2015:1686). As a result, global trade continues to be important despite efforts to build self-sustaining economies.

South Africa, an emerging market, has been grappling to position itself a key player in the global market. Like many economies, South Africa depends on imports of intermediate and finished goods, which makes the country vulnerable to external shocks. An analysis of the growth of South African supply (exports) relative to international demand for products exported by South Africa, reveals the structural weaknesses in South Africa‟s trade competitiveness (TradeMap, 2019). Exports from South Africa are mainly primary sector products that constitute a small proportion of world market share and are in low growth market segments (TradeMap, 2019). In 2018 South Africa recorded a positive trade balance, however, its exports constituted 0.5 percent of world trade in comparison to other emerging markets namely: Brazil 1.2 percent, Russia 2.3 percent; India and China 13 percent (Trade Map, 2019). A considerable proportion of exports in 2018 were classified as losers in growing markets (TradeMap, 2019). This means that despite these markets experiencing high and positive growth rates, South Africa‟s share in world exports between 2014 and 2018 declined. It is evident from the above that South Africa is vulnerable to shocks and disruptions such as a global pandemic, because it is dependent on trade.

The global economy is currently faced with the disruptions of the coronavirus SARS-Cov-2, resulting in the disease known as COVID-19. The COVID-19 pandemic originated in China in December 2019 and has rapidly swept across the world and affecting most of the world (Tindale et al., 2020:2). Consequently, several governments imposed travel and trade restrictions to contain the spread of the virus as they recognised that global connectedness was an enabling factor for spread of the disease (Fauver et al., 2020:994). The COVID-19 pandemic has been a significant disruption to global economic activity and to global supply chains. Attempts to contain the virus led to national and worldwide shutdowns with the concomitant disruption of global supply chains. Past pandemics show that at the onset people tend to perceive a higher risk of infection due to insufficient information and this can lead to avoidance of public spaces (Brahmbhatt & Dutta, 2008; McKibbin & Sidorenko, 2006). On the response end, public health protocols guide governments to impose restrictions to public spaces as a containment measure while an appropriate disease management approach is identified (Noy & Shields, 2019:7; Kleinman & Watson, 2006:31). Thus, the perceptions of the public and the reaction of government lead to business disruptions that result in demand and supply shocks (Chou et al., 2004:96).

Similar observations can be seen in non-pandemic crises such as the global financial crisis (GFC) of 2009 (Anderton & Tewolde, 2011). At the onset of the GFC, loss of confidence in banks caused the mortgage market to collapse as the market was perceived to be too risky (Makin, 2019:13). This resulted in a run on deposits and drying up lines of corporate credit and trade finance related products resulting in decline of global trade (Ahn et al., 2011:298). Governments responded by measures that included improved regulation of the financial sector, raising deposit insurance limits, stimulus, and stabilisation packages (Morrison, 2009:5; Khatiwada, 2009:2,10,13; Bhaskar & Gopalan, 2009:13).

Despite the growth in empirical studies about the COVID-19 pandemic, it remains unclear how South Africa‟s international trade performance will be in the future as studies concerning this issue are sparse. Having established South Africa‟s vulnerable international position and trade dependency, this paper aims to address this gap by assessing the impact of the COVID-19 pandemic on South African trade. This will be done by forecasting imports and exports using the auto regressive integrative moving average (ARIMA) model. This was achieved by pursuing three objectives:

- Compare the effects of the COVID-19 pandemic on South Africa‟s international trade performance against the effects of other previous crises.
- Examine the forecasting power of the ARIMA model in the presents of significant shocks in South Africa‟s international trade values.
- Forecast South Africa‟s future international trade values from August 2020 to July 2022.

The first objective involved trend and descriptive analysis. The second objective involved the assessment of the ARIMA model‟s capability to forecast future movements in international trade values in the presence of significant shocks. The third objective involved the use of the model to predict the export and import values for South Africa for the period August 2020 to July 2022.

The contributions of this article in quantifying the impact will assist policymakers and firms, among other stakeholders, who are concerned with supply chains disruptions as they manage the impact of the pandemic on their firms and the national economy at large.

LITERATURE REVIEW

Pandemics fall in the class of low frequency high impact risks (Ivanov, 2020:1). They fall outside the theory on economic costs of disease on an economy (Luh et al., 2018:218). In the normal context, disease introduces additional costs through lost opportunities, reduced productivity, and expenditure incurred in disease treatment (McKibbin & Sidorenko, 2006:7). In pandemic cases, the economy loses out due to demand shocks and supply side disruptions (McKibbin & Fernando, 2020:4; McKibbin & Sidorenko, 2006:39). These shocks result from a combination of risk perception and impact of containment strategies (Mackey & Liang, 2012:122). Despite being considered as one of the worst pandemics, the COVID-19 pandemic is not the first the world has experienced in the recent past. Notable pandemics include the plague originating from Surat, India in 1994 (Guha, 2020; Epstein, 2009), severe acute respiratory syndrome (SARS) in Guangdong, China in 2002 (Yang et al., 2020; Petersen et al., 2020; Kleinman & Watson, 2006), and the H1N1 swine flu in Mexico, 2009 (Maines et al., 2009:1).

Several important lessons emerge from both pandemic and non-pandemic crises. Five of the key lessons are discussed here. Firstly, transmission of crisis from one nation to another is through interconnections such as global supply chains. Hence, economies that are connected and open to trade tend be more affected (Hale et al., 2016:16; Coelho et al., 2020:5). Secondly, disruptions in the global supply chains also account for a significant decline in trade during crises (Ivanov, 2020:3). Thirdly, economies with high degrees of specialisation in supply chains (Yi, 2009:46; Miroudot & Ragoussis, 2009:6) and making use of distributed production facilities are particularly vulnerable (Amador & Cabral, 2017:4). Fourthly, the sectors most affected include those producing goods that rely on global trade of intermediate goods such as capital goods and automotive sectors (Makin, 2019:17). Finally, information about the degree of risk and the impact of the crisis is usually scarce (Strekalova, 2017:334).

The information scarcity does not only affect supply and demand but also affects institutions responsible for executing the response (Alcantara-Ayala, 2002:119). Inefficient flow of information causes delays in decision making that can compromise response coordination and timing, leading to suboptimal outcomes (Araz et al., 2020:3; Quarantelli, 1988:18). This is critical in an environment where resources are constrained by competing priorities in the pandemic context (Wankmuller, 2020:3). Predicting the impact of the pandemic on outcomes through forecasting can mitigate these challenges by guiding decision making (Calnan et al., 2018:401; Buyuktahtakin et al., 2018:1048).

While there are differences in the nature and severity of pandemics, they have all been observed to contribute to economic decline (Calnan et al., 2018:402). This poses a challenge for leaders to craft an appropriately timed response that balances the need to contain the pandemic and prevent irreparable economic damage (Ivanov, 2020:2).

Since trade will play a significant role in mitigating both disease spread and economic decline, responses to the crisis need to factor the impact of the pandemic on the nation‟s trade (Kassa, 2020:5). For the response to be effective it must be fact based, recognising the disruption of trade. Studies predicting the impact of the coronavirus pandemic on South African trade are sparse despite an increase in research on the pandemic.

RESEARCH APPROACH

Data

Monthly data for South African export and import values of products were obtained from the World Trade Organisation‟s Trade Map database, although COVID-19 restricted the movement of products and services. The period for the analysis was determined by the availability of monthly import and export data for South Africa. At the time of extraction, monthly data for exports and imports were available from January 2005 to July 2020. The data was in United States Dollars (USD: Thousands). Consumer Price Index (CPI) data was collected from Statistic South Africa‟s website and was used to adjust the export and import values for inflation. Thus, the data was converted to USD Constant Prices with January 2005 used as a base month. It is important to filter out the effects of changes in inflation, which allows the values to be reasonably compared across the different months.

Estimation methods

The initial step, in line with the first research objective, was to use trend analysis and descriptive statistics to analyse South African monthly international trade data from January 2005 to July 2020. The effects of COVID-19 on trade performance were compared against other previous crises (2008-2009) or notable shocks (2016). To address the second research question, we validated the forecasting power of the ARIMA model using historical data. This step aims to test the predictive power of the model by computing forecast values for the periods January 2008 to December 2009, January 2016 to December 2017, and July 2018 to July 2020; comparing them to actual import and export values during the same periods. After validation of the ARIMA model, research question three was addressed by forecasting the future movements of exports and imports. The ARIMA approach is discussed in detail, which begins with an assessment for autocorrelation and partial autocorrelation to determine suitability for ARIMA forecasting.

Autocorrelation and partial autocorrelation

As indicated in Guha and Bandyopadhyay (2016: 118), the autocorrelation function (ACF) is defined as follows: ACF=corr(X_t,X_(t-k)), where X_t is the current observation and X_(t-k) is an observation k periods ago. The values of the ACF ranges between -1 and +1. The partial autocorrelation function (PACF) measures the correlation between an observation k periods ago and the current observation, after accounting for observations at intermediate lags (lag<k) (Brooks, 2008: 222). For instance, the PACF for lag 4 measures the correlation between X_t and X_(t- 4) after accounting for the effects of X_(t-1) , X_(t-2) and X_(t-3). The ACF and PACF plots are generated and checked for spikes, which occur outside the range -1 to +1. Moreover, the data is checked for seasonality to ensure no critical information is left out in the building of ARIMA models.

ARIMA model

Theoretical foundation

Time series analysis is the backbone of ARIMA models. As explained by Asteriou (2006: 246) in his book, Applied Econometrics: A Modern Approach using Eviews and Microfit, for the time series framework, the initial point is to exploit the information about a variable that is present within the variable itself. The advance of time series analysis brought a view that contradicts that of the traditional econometricians as argued in the book. Traditional econometricians underscored the application of economic theory and the study of contemporaneous relationships to describe associations among explained and explanatory variables . That said, "...times series analysis contradicts the beliefs of economic theory, in that it is not based on any theoretical framework, but it considers it better to let the data „speak for themselves‟ to determine the model" (Asteriou, 2006: 246). Although these different approaches were not interrelated in the past, there seems to be convergence, as some of their basic features can be adopted and applied simultaneously. Since this study applies a single time series (i.e. series for trade), it is a univariate time series analysis. More specifically, it is a univariate ARIMA model.

To better understand time series and ARIMA models, the key concept of stationarity is described. According to Stock & Watson (2015: 577-578), in times series analysis, the notion that historical relationships can be generalised to the future is formalised by the stationarity concept, which suggests that the probability distribution of a time series variable does not change over time. Consequently, a stationary process requires the future to be the same as the past, at least in a probabilistic sense. Three characteristics of a stationary time series are as follows:

E(Yt)=constant for all t

Var(Yt)=constant for all t

Cov($Y\_t,Y\_(t+k)$)=constant for all t & all k^0

Characteristic one shows that a series (Y) exhibits mean reversion; the mean fluctuates around a constant long- run mean, it is constant over time. Characteristic two shows that the variance of a series is constant over time. The last characteristic is that the autocovariances remain constant over time and for each given lag.

Brooks (2008: 318) summarises the definition of a stationary series as one with “constant mean, constant variance and constant autocovariances” for each given lag. The key idea that is necessary for our ARIMA models and forecasts is that shocks to a stationary time series are essentially temporary, but as time goes on the effects of the shocks disappear and the series will revert to its long-run mean level (Asteriou, 2006: 247). In this case, the COVID-19 pandemic shocked South African trade values, but the effect will disappear over time. From a policy perspective, it is imperative to know the future movements of trade values, especially after the crisis. This is achieved through ARIMA forecasting.

ARIMA models and application

Given the earlier discussion, the ARIMA model is an approach for forecasting time series by assuming that past value of the series and past error terms contain information for forecasting (Ngan, 2016: 38). ARIMA models were first introduced by Box and Jenkins (1976). An ARIMA model is decomposed into autoregressive (AR) - indicates weighted moving average over past observations, integrated (I) - indicates linear trends or polynomial trend, and moving average (MA) - indicates weighted moving average over past errors (Guha and Bandyopadhyay, 2016: 118).

The AR (1) model is expressed as follows:

n = 0^+

where p_t is a white noise error term and 10 |<1 is a constrain that ensures the mean reverting characteristic of a stationary time series. This AR (1) model suggests that the present value of a variable (Y_t) is largely dependent on its previous value (Y_{t-1}). It also means that what will happen to the future value of the variable (Y_{t+1}) is dependent on the current values of the variable (Y_t).

The MA (1) model is expressed as follows:

Y=P+^-.I

where p t is a white noise error term and |9|<1 is required to avoid an explosive time series. This MA (1) model suggests that the present value of a variable (Y) is dependent on its immediate previous error terms (u 1).

Both AR and MA models give the rationale for forecasting future values using historical observations. When many lags are considered, the general forms of autoregressive and moving average models become AR(p) and MA(q).

By combining the AR(p) and MA(q) models, an ARMA(p, q) model is built. Adding the integrated (I) component leads an ARIMA model and it shows that the series is transformed into a stationary time series. In most cases, time series often contain seasonal effects, and seasonal differencing is used to eliminate the seasonal effects, leading to SARIMA models (Han et. al., 2010: 1399). Thus, two general expressions exist, which are non-seasonal ARIMA(p, d, q) and multiplicative seasonal ARIMA(p, d, q)(P, D, Q) where (P,D,Q) are the model"s seasonal components.

The non-seasonal ARIMA model can be written as follows:

= a + 71^-1 + 72^-2 + ------------------------ *■ Yp^t-p + + ^2^-2 + -------------- *■ ^qt^t—q

where Y_t is the observed series (i.e. trade value, in this study), p,q are orders of the model (i.e. chosen lags or previous trade values & errors), a and Y are parameters of the model. The random errors (ut) are assumed to be independently and identically distributed with a mean of zero and a constant variance of 6^2 . The Box-Jenkins ARIMA model, to estimate and forecast a univariate time series, involves three stages: identification, estimation and diagnostics checking (Asteriou, 2006: 257, Brooks, 2008: 230).

Identification is the stage for choosing appropriate order of the model, that is, p, d, and q. The series needs to be stationarity and hence if it is not, it can be differenced (i.e. including the d component) to make it stationary. This study starts by fitting an auto-ARIMA, which automatically chooses an appropriate model. But whenever the auto-ARIMA shows evidence of autocorrelation or partial autocorrelation, the model is customised to control for the identified lag order. But the stationarity test of the series is also undertaken using the Augmented Dickey-Fuller (ADF) unit root test.

Estimation is, at this stage, the estimated models that are computed using the maximum likelihood method or the least-squares method; this study uses the latter.

Diagnostics checking is done to determine whether the model is adequate. The ACF, PACF or Ljung-Box tests could be used to check for autocorrelation (Brooks, 2008: 231). The LBQ statistic test indicates whether the residuals over time are random and independent. The LBQ"s two hypotheses are the null hypothesis - the residuals are independently distributed, and the alternative hypothesis - the residuals are not independently distributed. Independence of residuals shows no autocorrelation. Once the models pass diagnostic checking, forecasting of international trade values is done.

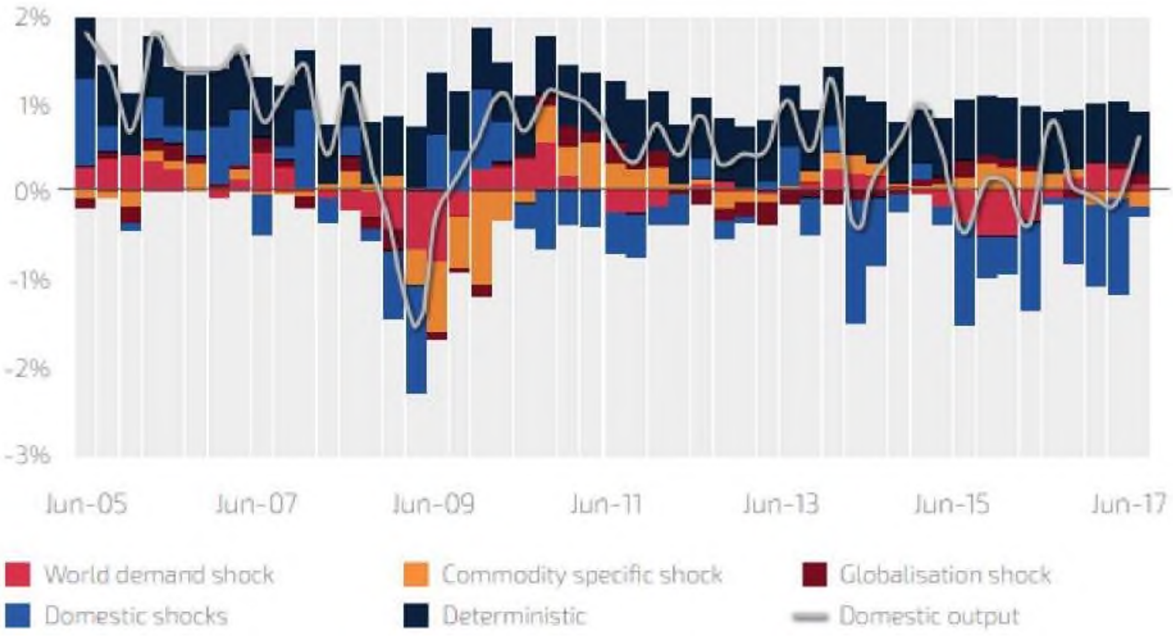
Validating ARIMA models

Having collected trade data from January 2005 to July 2020, the first step is to identify recessions and major swings in trade values that took place since 2005. South African trade values responded to disruptions such as the 2008-2009 recession and the recent COVID-19 pandemic. Another notable shock in economic growth and trade values happened in 2016. Thus, this study chooses three periods: January 2008 to December 2009, January 2016 to December 2017 and July 2018 to July 2020. Data from January 2005 to December 2007 (January 2005 to December 2015) is used to forecast trade between January 2008 to December 2009 (January 2016 to December 2017). Data from January 2005 to June 2017 is used to forecast trade between July 2018 and July 2020. The forecasts are compared against the actual trade values.

Forecasting trade values

After validating the ARIMA models, the next step is to forecast South African trade values from August 2020 to July 2022 using data from January 2005 to July 2020. Thus, the forecasts are starting from a period when nations are still

FIGURE 1: DECOMPOSITION OF SOUTH AFRICAN DOMESTIC OUTPUT (% CHANGE)



Source: World Bank, 2018

battling the COVID-19 pandemic.

RESULTS

Past recessions and international trade value movements

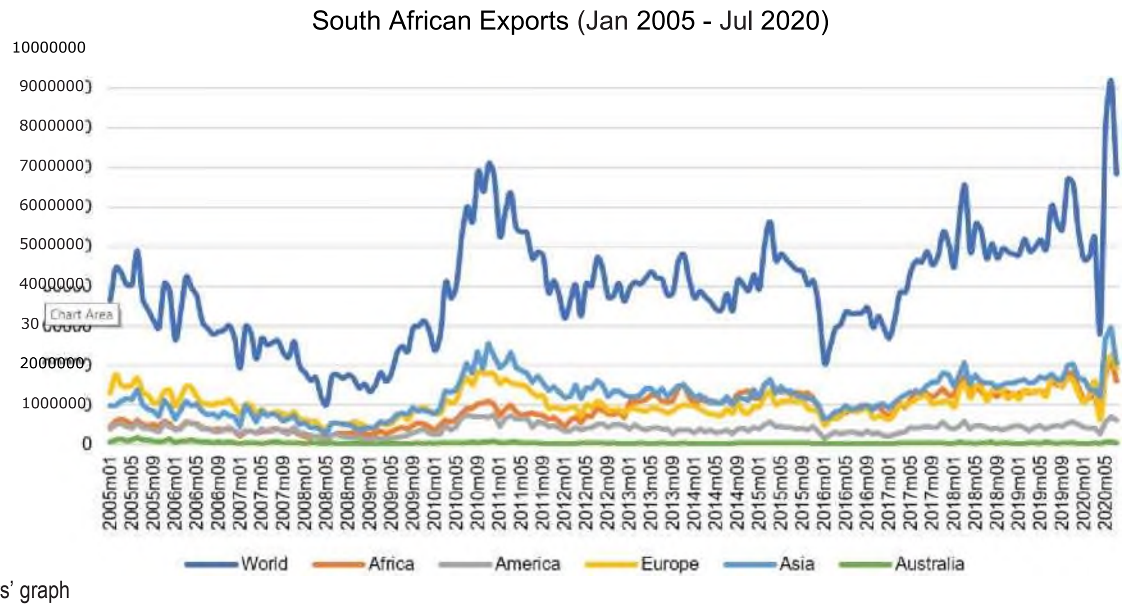
The series of international trade values are expected to respond significantly to recessions or shocks. The major focus was placed on three time periods. Firstly, the 2008-2009 period owing to the global financial crisis (GFC). The second period of interest was 2016, as a significant decline in South African economic growth was observed in that year. Lastly, the recent 2020 decline in growth due to the COVID-19 pandemic was also observed. Owing to the lack of monthly international trade data before 2005, it was not possible to consider other recessions that happened in the past before the 2008-2009 GFC. In South Africa, Figure 1 shows a massive recession that started in 2008, reaching the pick in 2009 and other significant declines in economic growth around 2014, 2015 and 2016. The response of South African trade values to these recessions is discussed.

SA international trade values' response to recessions in the period 2005-2016

During the global financial crisis, both export and import values for South Africa dropped significantly (as presented in Figures 2 and 3). The second notable drop in trade values occurred in 2016. The World Bank (2018:10) reported a drop in South African domestic output in the period 2008 to 2009 resulting from a combination of the global shocks, world demand shock, domestic shocks, and commodity-specific shocks.

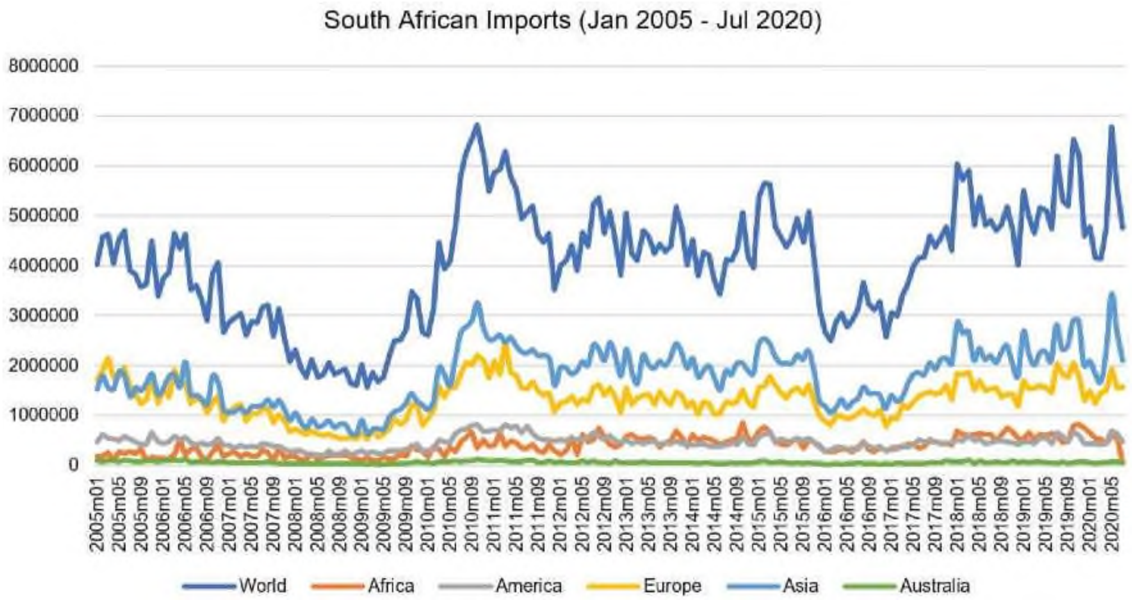
As shown in Figure 1, at the peak of the GFC, the major influence of the recession emerged from domestic shocks, followed by the world demand shock and then the commodity-specific shock. The second major drop in trade values in 2015 and 2016 was also associated with negative growth rates, mostly due to domestic shocks and the influence of the world demand shocks. The trends for the five regions and the rest of the world portray a similar pattern since 2005 as shown in Figures 2 and 3. Generally, the exports to Asia are large, followed by Europe, Africa, America and Australia, in this order. The same order applies for the imports from these continents, except that the imports from America have slightly been higher than imports from Africa. This information is summarised by the descriptive statistics in Table A1, in Appendix A. It is difficult to tell from the trends which of the five regions‟ trade values changed by a larger percentage, possibly due to the effects of recessions or other macroeconomic shocks. The next section

FIGURE 2
PLOT FOR SOUTH AFRICAN EXPORTS



Source: Authors' graph

FIGURE 3
PLOT FOR SOUTH AFRICAN IMPORTS



Source: Authors' graph

presents descriptive statistics for the percentage changes in trade values across the five regions and the world at large.

Percentage changes in trade values

Table 1 presents the changes in South African trade values since 2005. Between 2005 and 2020, South Africa recorded the largest decrease in export values to Australia (April 2020), followed by Europe (April 2020), Africa (April 2020), America (April 2020) and Asia (January 2016), in this order.

This illustrates that in general, the major decline in exports to four out of five continents occurred this year. This is reasonable given the lockdowns that happened not only in South Africa but also in several countries over the world. Exporters were not able to produce and demand from other countries dropped due to the COVID-19 pandemic.

TABLE 1
PERCENTAGE CHANGES IN EXPORTS AND IMPORTS VALUES (JAN 2005 - JUL 2020)

	Exports					
	World	Africa	America	Europe	Asia	Australia
Min	-45,286 (Apr 2020)	-48,791 (Apr 2020)	-47,708 (Jan 2016)	-60,477 (Apr 2020)	-36,689 (Jan 2016)	-64,210 (Apr 2020)
Max	181,595 (May 2020)	174,496 (May 2020)	168,257 (Jan 2008)	206,843 (May 2020)	121,478 (May 2020)	239,049 (May 2020)
Avg	1,917	2,374	2,862	1,982	2,154	5,673
	Imports					
Min	-34,367 (Dec 2006)	-90,902 (Jul 2020)	-31,204 (Jan 2016)	-35,196 (Dec 2006)	-32,660 (Dec 2006)	-63,377 (Feb 2009)
Max	43,047 (May 2020)	276,580 (Oct 2007)	58,731 (Mar 2010)	47,050 (Jan 2013)	51,908 (Mar 2010)	167,161 (Mar 2010)
Avg	1,101	7,677	1,281	1,310	1,429	5,321

Note: In parenthesis () are the months when each value was recorded.

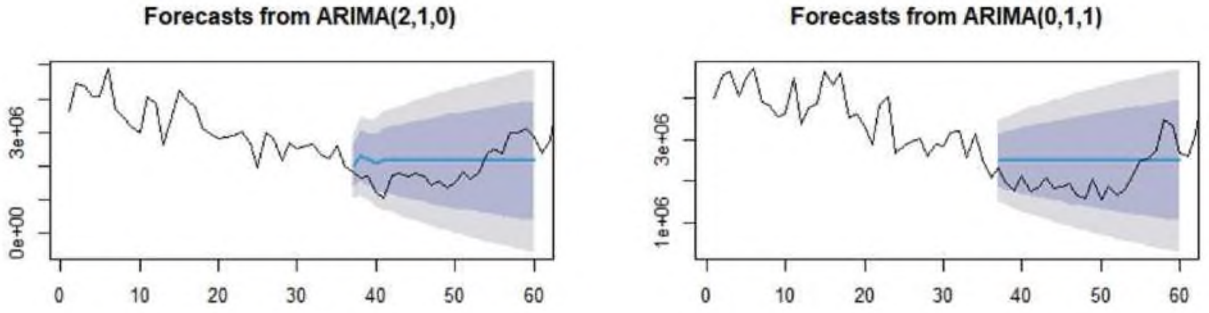
This massive decline in exports exceeded what happened in 2008 to 2009 during the GFC. Another remarkable observation is that the largest percentage increase in exports during the period of study was to Australia (May 2020), followed by exports to America (June 2008), Africa (May 2020) and Asia (May 2020), and then Europe (May 2020). Subsequently, South Africa‟s exports to America responded the most to the GFC while exports to the other four regions responded mostly to COVID-19. This is not surprising given the GFC originated in America and was one of the most affected regions. A larger positive percentage change during these recessions shows how export values to a particular region moved from the lower values.

As for imports, the largest percentage drop was for products from Africa (July 2020), followed by Australia (February 2009), Europe (December 2006), Asia (December 2006) and lastly, America (January 2016). In terms of positive changes, the highest percentage increase in imports was from Africa (October 2007) and Australia (March 2010).

It can be concluded from the descriptive analysis that South African trade values have been volatile, with major swings in export and import values reported mostly during recessions (e.g. 2020, 2016, 2008-2009). Figures 2 and 3 reveal the swings in trade values especially in 2008-2009, 2016 and 2020. Moreover, the results show that the COVID-19 crisis caused major swings in exports compared to the previous 2008-2009 GFC and the 2016 economic growth shock. While a major change in imports from the rest of the world was reported in 2020, major changes in regional imports were recorded in different years, as shown in Table 1. This answered the first research question.

Researchers and policymakers have been using forecasting models such as ARIMA to predict the future movements of trade (e.g. Farooqi, 2014). It is imperative to investigate the predictability power of such forecasting models in the presence of significant shocks. Particularly, in the presence of the recent COVID-19 crisis that forced most economies into national lockdowns, it is of interest to know the potential effect of this on future international trade values. This is because international trade movements play a vital role in other macroeconomic fundamentals such as the balance of trade, exchange rate and economic growth. This study investigates the forecasting power of the ARIMA models in the presence of the major swings in trade values, which then followed by forecasting future values. Checking for autocorrelation and stationarity properties of the data are essential preliminary considerations.

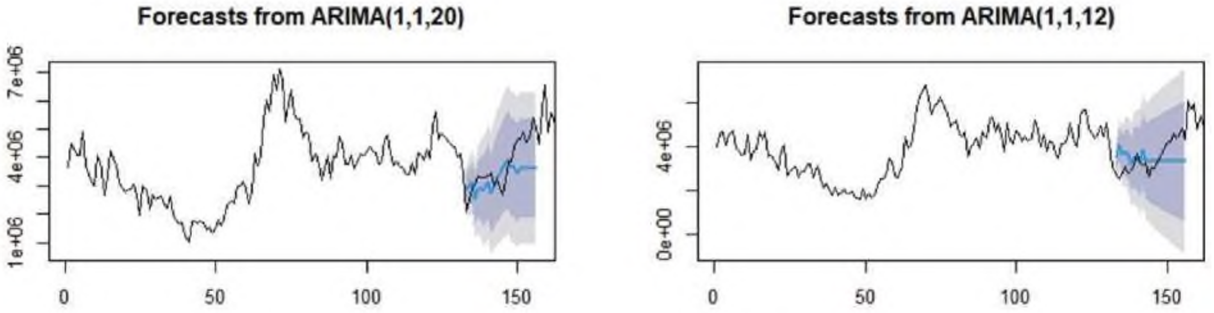
FIGURE 4 FORECASTING 2008-2009 INTERNATIONAL TRADE VALUES



(a) Exports to the world (b) Imports from the world

Source: Authors’ computation

FIGURE 5
FORECASTING 2016-2017 INTERNATIONAL TRADE VALUES



(a) Exports to the world (b) Imports from the world

Source: Authors’ computation

Preliminary checks

Stationarity of data

Before evaluating the forecasting power of ARIMA models, stationarity tests were conducted using the ADF unit root test by Dickey and Fuller (1979, 1981). The results showed that except for the exports to Australia, all series were stationary in the first difference and hence the tested ARIMA models should show an integration of order one (i.e. in ARIMA, the „I“ part should be 1).

Autocorrelation in original series

The autocorrelations and partial autocorrelations of the export and import values were checked. Across all the ACF plots there were significant spikes that dropped gradually as the number of lags increased. On the other hand, the PACF indicated only a significant initial lag across all the series. Working with the level values of the series could generate poor forecasts due to the presence of autocorrelation. When the Auto-ARIMA detected any autocorrelation, it was eradicated by accounting for the detected lags.

Seasonality check

For instance, Figure A1 in Appendix A reveals seasonality in data. Changes in exports are generally negative in January, April, July, and December while changes in imports are generally negative in February, April, September, November, and December. These seasonal patterns are accounted for in most of the estimated ARIMA models.

Validating ARIMA models in the presence of significant shocks

Our major focus is on how ARIMA models would have been able to make meaningful forecasts during the January 2008 to December 2009 (validation window one), January 2016 to December 2017 (validation window two) and July 2018 to July 2020 (validation window three) periods.

Validation windows one and two

Data for South African exports to and imports from the rest of the world is used to validate ARIMA models during significant swings that occurred in the periods January 2008 to December 2009 and January 2016 to December 2017. Figures 4 and 5 show the results. In both figures, although the point forecasts are supposed to be the best guess of what will happen, they are not realistic as trade values are expected to change or fluctuate due to seasonality and trends (see Figure A1). It is possible in this case that the smaller sample sizes may explain the poor performance of the point forecast. Despite this problem, this does not render ARIMA models unsuccessful since they provide the lower and upper values at both 80 percent and 95 percent forecast intervals (FIs) within which the actual values are expected to fall.

In the plots, the outer interval is the 95 percent forecast interval (FI), and the inner interval is the 80 percent FI. These intervals are essential as policymakers want to get a sense of how far the actual values might be. For both exports and imports, the ARIMA models in Figures 4a, 4b, 5a and 5b correctly predicted that there was an 80 percent chance that the actual future values will fall within the inner forecast intervals.

Validation window three

The results for validating ARIMA models by forecasting trade values between July 2018 and July 2020 are presented in Appendix B. Unlike the previous validation windows, some breaches of the forecast intervals occurred. In June 2020, the 95 percent upper forecast interval was breached in terms of exports to the rest of the World, Africa, America and Asia (see Figures B1a, B1b and B1c, B2a). The lower 95 percent forecast interval was only breached in the case of imports from Africa in July 2020, which shows the lowest import value of 51832 (Figure B2d). Forecasts for imports from Asia were also breached (Figure B3c). For the remaining six forecasts, ARIMA‟s forecast intervals were not breached.

The key conclusions from validating ARIMA models are that:

- The actual values are most likely to lie within the 80 percent FI most of the time.
- When a significant spike in trade values happens, the 95 percent forecast interval might be breached in certain months (in our tests, a breach occurs only in one month).
- The breach of forecasts for exports and imports does not essentially happen across all export and import forecasts (in our tests, it occurs in six out of 16 forecasts), mainly depending on how trade values for a particular region have changed.

Based on these findings, the breach of ARIMA forecast intervals is only experienced when the change in trade values is significantly large. For instance, the breaches in this study were only associated with major changes in trade values due to the COVID-19 effect, but not the other tested periods like the GFC.

South African international trade value forecasts (August 2020 to July 2022)

Forecasts (USD Constant Prices, 2005 base year)

This section presents the forecasts for exports and imports from August 2020 to July 2022. Figure C1a shows the forecasts for total exports and imports from the rest of the world. The forecasts entail that exports for South Africa will be higher than imports during the entire forecasting period. This followed a rise in exports above imports in the last three months (May, June and July) of the sample. Note that the exports and imports are expressed in thousands of USD at constant price (the base month January 2005). In July 2020, the export values were 6850302 while imports were 4757346. The forecasts show that the values will remain generally between 4000000 and 8000000 during the forecasting period while imports will be generally between 3500000 and 5000000. According to OECD (2020: 303), the “COVID-19 outbreak adds to South Africa‟s already severe economic challenges, with depressed growth, large fiscal deficits, increasing debt and high social vulnerabilities.” Moreover, strict measures to contain the spread of the coronavirus affected production in major sectors and led to a slump in demand. The domestic demand shock may persist for several months, which may also explain why imports forecast might remain lower than exports.

Holding other factors constant, this prediction shows that the country is likely to experience a positive balance of trade (BOT) position in the coming months. While this may be fascinating from the perspective of BOT, the forecasts indicate that between August 2020 and July 2022 the exports will drop by 34 percent. In the same period, imports will drop by approximately nine percent. The exports from the rest of the world will be fluctuating with notable drops likely to occur in January 2021, December 2021 and July 2022. A fall in export values during these months is evidence for seasonal patterns in exports that are demonstrated in Figure A1 in Appendix A. Major drops in imports are likely to happen in June 2021 and December 2021. Seasonal patterns play a role in these drops. However, fluctuations in exports and imports are likely to emerge from other factors such as the domestic demand shock, world demand shock, commodity-specific shocks and exchange rate volatility. These are future risks exporters and importers should expect.

Figure C1b provides extra information concerning the expected changes in exports and imports compared to the previous periods. The past performance is represented by the yearly averages of exports in the periods August 2018 to July 2019 (5041370 - period 1) and August 2019 to July 2020 (5943896 - period 2). The yearly averages for the export forecasts will be 7502130 and 6355377 in the periods August 2020 to July 2021 (period 3) and August 2021 to July 2022 (period 4), respectively. Thus, exports from the rest of the world increased by 18 percent in period 2 from the preceding period August 2018 to July 2019. The forecasts show that in a year, the yearly average will rise by 26 percent in period 3 but becomes negative (-15%) in period 4. In these four periods, the imports increased by approximately five percent in the second period and predicted to drop by 16 percent in the third period, and another drop (6%) in the fourth period. Subsequently, the yearly average of exports is expected to increase first and then drop, whereas the yearly average of imports continuously decreases.

Figures C1c and C1d decompose the yearly average exports and imports by regional destination and origin (Africa, America, Europe, Asia and Australia) in the four periods: August 2018 to July 2019 (period 1), August 2019 to July 2020 (period 2), August 2020 to July 2021 (period 3), and August 2021 to July 2022 (period 4). Across all periods, most exports have been to Asia, followed by Europe and Africa while America and Australia are the least destinations. China has been the top trading partner of South Africa and it has a major influence on Asia being a major export destination of South Africa. From period 1 to period 2, there was an increase in exports to all regions. ARIMA models forecast that the yearly averages of exports to Africa, Europe and Asia will continue to rise in periods 3 and 4. However, the yearly averages of exports to America and Asia are likely to decline in the fourth period. Figure C1d shows that yearly average imports from America, Europe and Asia increased between period 1 and period 2 while in the same periods the imports from Africa and Asia decreased. In period 3, the forecasts indicate that the yearly average imports from Africa, America, Europe and Asia will be lower than what was reported in period 2. The yearly average of imports from Australia in period 3 will be slightly higher than what was recorded in period 2. Except for Australia, the yearly average imports from the rest of the regions in period 4 will be less than period 2.

The export and import forecasts for the period from August 2020 to July 2022, which are used in Figure C1, are based on ARIMA‟s point forecasts. These values are presented differently in Figure C2 to show the forecasts for each of the 24 months. For the exports, the order of the regions from the one with the highest value is as follows: Asia, Europe, Africa, America and Australia (Figure C2a), which is the same order portrayed in Figure 2 based on past data. In terms of imports, the order of the regions from the one with the highest value is as follows: Asia, Europe, America, Africa and Australia (Figure C2b), which is also the same order illustrated in Figure 3 based on historical data. The forecasts indicate that South Africa will export more to Africa than America but will import more from America than Africa; the highest value of exports and imports are for Asia, which is followed by Europe. The least trade values are between South Africa and Australia, which also has to do with the size of Australia compared to other regions/ continents.

Besides the point forecasts that are discussed above, in practice, the actual future values are likely to be lower or higher than the point forecasts. Accordingly, the ARIMA models also present forecasts intervals (80% FI and 95% FI). The intervals illustrate how high and how low trade values might become. Figures C3 to C5 in Appendix C presents the detailed forecasts that show the high(hi) and low(lo) forecast intervals (lo80 - hi80; lo95 - hi95) within which the actual values might fall. For the 24 forecasted months, each month has two upper limits and two lower limits. The 80 percent

FI that is close to the point forecasts shows that there are is an 80percent chance that the actual values will be within this narrow interval. The 90 percent FI that is far from the point forecast shows that there is a 95 percent chance that the actual values will be within this wider interval.

To reasonably discuss the forecasts across all regions, this study also uses the key results from the validation models. Validation window one and two suggest that the actual trade values are most likely to fall within the 80 percent FI (Figures 4 and 5). At this stage, it could be reasonable to expect South African export and import values (at constant prices) from August 2020 to July 2022 to be found mostly within the lo80 and hi80 interval. As the forecasted period increase, the distance between the point forecast and the intervals becomes wider to accommodate increased potential forecasting error.

The recent global crisis of the COVID-19 pandemic may present different sets of risks with different implications of the forecasting power of ARIMA models. Therefore, the third validation of the ARIMA model, by forecasting the last 25 months (July 2018 to July 2020) of the full sample, provides useful insights. The last months of this forecasting period cover significant changes in international trade values due to the pandemic and the associated lockdowns that occurred. There are significant spikes in actual exports that occurred in April 2020 (drop) and June 2020 (pick), and for imports in March 2020 (drop) and May 2020 (pick) (Figures 2 and 3). The significant drops followed lockdowns initiated in many countries. South Africa‟s trade values in March 2020 reveal that COVID-19 containment measures taken by the country‟s global partners mainly affected the imports of the country (Viljoen, 2020). Given that the trade values used in this study were adjusted for inflation, a drop in CPI from 3 to 2.2 between March 2020 and June 2020 also shows an improvement in trade values during that period.

Thus, the 95 percent intervals of exports and imports for the various regions in Figures C3 to C5 (Appendix C) might be breached if another massive swing happens in the future trade. If a major global shock occurs, the forecast intervals that are likely to be breached are for exports to the rest of the world, Africa, America and Asia.

Further insight from Figure B1 is that the actual export values to the rest of the world, Africa and America are likely to lie above the point forecast and within the hi80 percent interval. But during a crisis and sharp changes in export values, the 95 percent forecast interval might be breached. This might happen to the forecast intervals in Figure C3a, C3b and C3c but the probability is very low. On the other hand, the actual exports to Europe are more likely to fall below the point forecast and within the lo80 percent interval for much of the forecasting period as revealed in Figure B1d. The actual export values to Asia and Australia are more likely to fluctuate around the point forecast and within the 80 percent interval (Figures E2a and E2b). Based on other ARIMA validation models (Figures E2c, E3a, E3b, and E3c), the actual values of imports from the rest of world, America, Europe and Asia are likely to appear above the point forecast and mostly within the hi80 intervals. In terms of Africa and Australia, the point forecast is more likely to over-value the imports from these two regions; the actual values are most likely to fall within the lo80 percent interval (Figures E2d and E3d).

What is likely to happen to the trends?

While Figures C3 to C5 clearly show the intervals, it is difficult to see from these figures per se whether the trends of trade values for the various regions are likely to decrease or increase in comparison with the last observed values in July 2020. The trends for the international trade values across many regions are presented in Appendix D, Figures D1 to D3. South African total exports to the rest of the world are expected to decrease between July 2020 and July 2022, with a notable decline likely to happen in December 2021 (Figures D1a and C3a). Exports to America are also expected to decrease continuously during the forecasting period (Figure D1c). Exports to Australia may also be declining during the forecasted period, with notable declines likely to occur in April 2021 and April 2022. On the other hand, our forecasts show that exports to Africa, Europe and Asia (Figures D1b, D1d and D2a) are likely to increase in the next 24 months. There has been a general increase in exports to these three regions since another substantial decline recorded in January 2016.

Figures D2c and D3c suggest that the future values of imports from the rest of the world and Asia are likely to decrease in the period between August 2020 and July 2022. Significant drops in imports from the world might materialise in June 2021, December 2021 and April 2022. As for Asia, a major drop is expected in June 2022. No significant changes might be expected in future imports from America, Europe and Australia (Figures D3a, D3b and D3d). Constrained domestic demand in South Africa could be one of the explanations for the expected drop or an insignificant change in import values. The months of national lockdowns depleted household savings and raised debts. As a result, it may take time for households and firms to become financially stable and increase demand for foreign products. However, imports from within the African continent might rise from August 2020 to July 2022, but at the level below the records of the previous calendar. As discussed earlier, it is important to bear in mind that the actual trends may lie above or below the point forecast trend but within the forecast intervals.

Diagnostics and accuracy of the models

This section presents the diagnostics of the estimated models. Table 2 shows the specification statistics for models used to forecast trade values from August 2020 to July 2022. Table 3 presents the diagnostics statistics for the validation models.

TABLE 2
ACCURACY OF THE FORECASTING MODELS AND DIAGNOSTICS

	Export models					
	World	**Africa**	**America**	**Europe**	**Asia**	**Australia**
Model	ARIMA(1,1,26)	ARIMA(0,1,2)	ARIMA(1,1,24)	ARIMA(2,1,2)	ARIMA(2,1,0)	ARIMA(1,0,13)
MAPE	9,673	11,375	13,457	12,458	12,041	23,490
Accuracy	90%	89%	87%	88%	88%	77%
MAE	365409,700	93252,960	48474,570	117764,900	135873,700	10044,670
LBQ	5.977	18,228	7,003	19,599	13,149	9,870
(P-value)	(0.113)	(0,572)	(0,072)	(0,419)	(0,903)	(0,361)
	Import models					
Model	ARIMA(1,1,36)	ARIMA(1,1,24)	ARIMA(2,1,0)	ARIMA(0,1,1)	ARIMA(1,1,25)	ARIMA(1,1,24)
MAPE	8,801	27,841	10,675	10,185	10,393	20,733
Accuracy	91%	72%	89%	90%	90%	79%
MAE	335633.200	77751,830	47481,720	123718,800	178122,300	10652,150
LBQ	7.598	4,488	16,284	18,000	5,347	5,269
(P-value)	(0.055)	(0,213)	(0,638)	(0,522)	(0,148)	(0,153)

Note: LBQ stands for Ljung-Box Q statistic.

This study starts by fitting the Auto-ARIMA model, which automatically select an appropriate model. Residuals of the selected models are checked for autocorrelation and normality. The Ljung-Box Q (LBQ) tests are used to check for autocorrelation. The LBQ statistics in Table 2 are not significant at the five percent level and hence the null hypothesis cannot be rejected, implying the absence of autocorrelation.

TABLE 3
FIT AND ACCURACY OF THE MODELS

Testing period	**Jan 2008 to Dec 2009**		**Jan 2016 to Dec 2017**	
	Exports	**Imports**	**Exports**	**Imports**
Model	ARIMA(2,1,0)	ARIMA(0,1,1)	ARIMA(1,1,20)	ARIMA(1,1,12)
MAPE	12,218	12,149	8,766	10,100
Accuracy	88%	88%	91%	90%
MAE	369504,400	408968,300	298110,600	383622,100
LBQ	6,813	3,602	7,677	6,503
(P-value)	(0,235)	(0,730)	(0,053)	(0,090)

Besides the LBQ statistics, during estimations, residuals of the Auto-ARIMA forecasting models were checked for significant spikes across lags. Spikes outside the horizontal dotted lines or 95 percent confidence intervals in ACF imply evidence of autocorrelation and hence an ARIMA model would be customised to account for the observed lags. This is the reason why other models have higher lags. Additionally, the distribution of the residuals was also checked for normality. Across all models, the residuals appeared to be normally distributed .

To assess the accuracy of the forecasts, this study reported the mean absolute percentage error (MAPE) and the mean absolute error (MAE) values of the estimated models. MAE is the average measure of how, in absolute terms, the forecast is from the actual value. MAPE is a measure of how far away in absolute percentage the forecast value is from the actual value. These two measures determine the prediction accuracy of a forecasting model or method. It is not clear to decide whether the size of MAE is reasonable since it depends on what is being measured, but MAPE can provide a better view. The accuracy of the forecasts is calculated by subtracting the MAPE value from 100. Our key forecasting models in Table 2 shows that the accuracy levels of the export and import forecasts are above 77 percent. The validation models in Table 3 show the accuracy levels above 88 percent. While the statistics for the other twelve models for validation window three are not displayed in Table 3 (for the sake of space) there was no autocorrelation; residuals show normality and the forecasts accuracy levels were above 88 percent, except for two models with 74 percent and 77 percent accuracy.

DISCUSSION

This is the first study to our knowledge to test the predictive power of ARIMA models to predict the impact of global crises on South Africa"s trade, and to subsequently apply the model to predict the impact of COVID-19 on South Africa"s trade. The results of the descriptive statistics showed South Africa"s trade responsiveness to the GFC in the period 2008 to 2009, the economic growth shock in 2015-2016 period, and to the COVID-19 pandemic in 2020. In general, South Africa"s trade contracted significantly in response to the COVID-19 pandemic compared to the GFC. The World Bank (2018:10) reported a drop in South African domestic output in the period 2008 to 2009 resulting from a combination of the global shocks, world demand shock, domestic shocks, and commodity-specific shocks. We believe that these factors apply to the country"s trade following the effects of the COVID-19 pandemic.

An analysis of South Africa"s trade with the five regions revealed similar patterns in the proportions of values of trade with Asia; accounting for the largest proportion of import and export, followed by Europe and Africa. The lowest value of trade was observed between South Africa and Australia. In terms of percentage changes in trade values between South Africa and the five regions, South Africa recorded the largest decrease in export values, and the respective periods of significant decline were as follows: Australia (April 2020), Europe (April 2020), Africa (April 2020), America (April 2020) and Asia (January 2016), in this order. This indicates that the major decline in exports to four out of five continents occurred in 2020 and are associated with the COVID-19 pandemic. This is reasonable given the lockdowns that happened not only in South Africa but also in several countries over the world. Exporters were not able to produce, and demand from other countries dropped as a result of the COVID-19 pandemic. This massive decline in exports exceeded what happened in 2008 to 2009 during the GFC. Another remarkable observation is that the largest percentage increase in exports during the period of study was to Australia (May 2020), followed by exports to America (June 2008), Africa (May 2020), Asia (May 2020) and then Europe (May 2020). Subsequently, South Africa"s exports to America responded the most to the GFC, while exports to the other four regions responded mostly to the COVID-19 pandemic. This is not surprising given the GFC originated in America and was one of the most affected regions. A larger positive percentage change during these recessions shows how export values to a particular region moved from the lower values. As for imports, the largest percentage drop was for products from Africa (July 2020), followed by Australia (February 2009), Europe (December 2006), Asia (December 2006) and then America (January 2016). In terms of positive changes, the highest percentage increase in imports was from Africa (October 2007) and Australia (March 2010).

The predictive power of the ARIMA models was initially validated by assessing whether the model could make meaningful forecasts during the 2008-2009 GFC and during 2016. For both exports and imports, the ARIMA models correctly predicted that there was an 80 percent chance that the actual future values in the periods January 2008 to December 2009, and January 2016 to December 2017 may fall within the forecasting interval. Further validation of the ARIMA model was made to forecast trade between July 2018 and July 2020 (last 25 months of the dataset), the period associated with a massive swing in trade due to COVID-19. This validation shows that it is possible that the 95 percent FI could be breached, but the chances are thin. Overall, the results revealed that the predictive power of ARIMA models is good even in the presence of significant swings in the South African export and import values. However, policymakers should not rely on the point forecast, especially when the forecasts are based on a small sample size of historical data. Forecast intervals are very crucial due to the high probability of success.

Having tested the forecasting power of ARIMA models, the next step in the analysis was to forecast the future international trade values from August 2020 to July 2022. The forecasts show that exports for South Africa will be higher than imports during the entire forecasting period, following a rise in exports above imports in the last three months (May, June and July) of the sample. According to OECD (2020: 303), the "COVID-19 outbreak adds to South Africa‟s already severe economic challenges, with depressed growth, large fiscal deficits, increasing debt and high social vulnerabilities." Moreover, strict measures to contain the spread of the coronavirus affected production in major sectors and led to a slump in demand. The domestic demand shock may persist for several months, which may also explain why imports forecast might remain lower than exports. Additionally, the results show that seasonal patterns play a role in these drops. However, fluctuations in exports and imports are likely to emerge from other factors such as the domestic demand shock, world demand shock, commodity-specific shocks and exchange rate volatility. These are future risks exporters and importers should expect. The regional analysis of the destination of South African exports shows the major destinations Asia, Europe and Africa respectively while America and Australia are the least destinations. China has been the top trading partner of South Africa and it has a major influence on Asia being a major export destination of South Africa.

The ARIMA model forecasts show that the yearly averages of exports to Africa, Europe and Asia will continue to rise in periods August 2020 to July 2021 (period 3) and August 2021 to July 2022 (period 4). However, the yearly averages of exports to America and Asia are likely to decline in the fourth period. In contrast, except for Australia, the yearly average imports from Africa, America, Europe and Asia are expected to be lower than in August 2019 to July 2020 (period 2).

The main contribution of this study is that it provides forecasts on South Africa‟s trade post the COVID-19 pandemic. The primary role of forecasting is to provide support for future decisions (Elliott & Timmermann, 2016:82). In a pandemic context where there are information and resource constraints, data lean and agile forecasting approaches are preferable (Prideaux et al., 2003:477). Besides, among the strengths of this study is the use of time series data. Time series data captures the variation of macroeconomic situations with time. They are useful when relating temporal macroeconomic trends to the occurrence of significant events. The autoregressive integrative moving average (ARIMA) models are a powerful tool for analysing empirically observable patterns (Hochrainer, 2009:12). ARIMA models have been applied in diverse contexts for analysing the impact of macroeconomic disruptions such as natural disasters (Zhu et al., 2018), pandemics (Song et al., 2016) and market failures (Cui, 2011;Wang et al., 2018), yielding reasonably accurate results. Hence, assessing the applicability and performance of ARIMA models to forecasting COVID-19 macroeconomic impacts is of academic interest.

Derived from this analysis, among the key insights for policymaking, South Africa is high likely to report a positive trade balance (exports > imports). This will contribute to a favourable balance of payment (BOP) position and exchange rate during the forecasted period. However, the ultimate outlook of the South African trade values (at constant prices) will also depend on other factors such as the exports and imports of services and inflation. We believe that the poor domestic demand may explain the inferior imports against exports predicted between August 2020 and July 2022. While this may be good for the trade balance, poor domestic demand could also weaken the country‟s economic growth projections. The forecasts in this study may also be used by policymakers to anticipate tariff revenue from the different regions. It is also important for policymakers to advance bilateral trade agreements with Asian, European and African countries; the major export destinations. The African Continental Free Trade Area (AfCFTA) is a welcome strategy that may boost trade between South Africa and other African countries.

CONCLUSION

While there are differences in the nature and severity of pandemics, they have all been observed to contribute to economic decline. Information about the unfolding of the impact is usually scarce in the early phases of a pandemic. This poses a challenge for leaders to craft an appropriately timed response that balances the need to contain the pandemic and prevent irreparable economic damage. Since trade will play a significant role in mitigating both disease spread and economic decline, responses to the crisis need to factor the impact of the pandemic on the nation‟s trade. This study demonstrates that the COVID-19 pandemic, like other supply chain disruptions of global proportion, will result in the contraction of South African trade. This calls for firms and the government to reinforce competencies in the domestic supply chains, and to strengthen trade agreements with trade partnerships in Africa, Asia and Europe to strengthen the adaptive power of firms and the economy in response to the pandemic. The results show that the impact worsens with time, which implies that the sooner the competency reinforcements are done, the better the economic outcomes. The study provides policymakers and business management a basis for the development of fact-based responses to the pandemic.

REFERENCES

Ahn, J., Amiti, M. & Weinstein, D. E. 2011. Trade finance and the great trade collapse. American Economic Review, 101, 298-302.

Alcantara-Ayala, I. 2002. Geomorphology, natural hazards, vulnerability and prevention of natural disasters in developing countries. Geomorphology, 47, 107-124.

Amador, J. & Cabral, S. 2017. Networks of value-added trade. The World Economy, 40, 1291-1313.

Ambulkar, S., Blackhurst, J. & Grawe, S. 2015. Firm’s resilience to supply chain disruptions: Scale development and empirical examination. Journal of operations management, 33, 111-122.

Anderton, R. & Tewolde, T. 2011. The global financial crisis: Understanding the global trade downturn and recovery 1. The World Economy, 34, 741-763.

Araz, O. M., Choi, T.-M., Olson, D. & Salman, F. S. 2020. Data analytics for operational risk management. Decision Sciences. https://doi.org/10.1111/deci.12443.

Asteriou, D. 2006. Applied Econometrics: A Modern Approach using Eviews and Microfit. United States of America, New York: Palgrave Macmillan.

Baldwin, R. & Lopez-Gonzalez, J. 2015. Supply chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses (Working Paper No. 18957). National Bureau of Economic Research (NBER). doi, 10, w18957.

Begen, M. A., Pun, H. & Yan, X. 2016. Supply and demand uncertainty reduction efforts and cost comparison. International Journal of Production Economics, 180, 125-134.

Bhaskar, R. R. & Gopalan, Y. K. 2009. The financial crisis in S, M and L: three very different countries respond similarly. The Regional Economist, 2.

Blanchard, E. J., Bown, C. P. & Johnson, R. C. 2016. Global supply chains and trade policy, The World Bank.

Box, G, E, P. & Jenkins, G, M. 1976. Time Series Analysis: Forecasting and Control. Revised edition. San Francisco: Holden-Day.

Brahmbhatt, M. & Dutta, A. 2008. Economic Effects during Outbreaks of Infectious Disease. World Bank Research Digest, 2, 7.

Brooks, C. 2008. Introductory Econometrics for Finance. Second Edition. United States of America, New York: Cambridge University Press.

Buyuktahtakin, i. E., Des-Bordes, E. & Kibi§, E. Y 2018. A new epidemic-logistics model: Insights into controlling the Ebola virus disease in West Africa. European Journal of Operational Research, 265, 1046-1063.

Calnan, M., Gadsby, E. W., Konde, M. K., Diallo, A. & Rossman, J. S. 2018. The response to and impact of the Ebola epidemic: towards an agenda for interdisciplinary research. International journal of health policy and management, 7, 402.

Cantwell, J. 2017. Innovation and international business. Industry and Innovation, 24, 41-60.

Chou, J., Kuo, N.-F. & Peng, S.-L. 2004. Potential impacts of the SARS outbreak on Taiwan’s economy. Asian Economic Papers, 3, 84-99.

Coelho, M. T. P., Rodrigues, J. F. M., Medina, A. M., Scalco, P., Terribile, L. C., Vilela, B., Diniz-Filho, J. a. F. & Dobrovolski, R. 2020. Global expansion of COVID-19pandemic is driven by population size and airport connections. PeerJ, 8, e9708.

Contractor, F. J., Kumar, V. & Dhanaraj, C. 2015. Leveraging India: Global interconnectedness and locational competitive advantage. Management International Review, 55, 159-179.

Cui, F. 2011. ARIMA models for bank failures: Prediction and comparison.

Dickey, D. A. & Fuller, W. A. 1979. 'Distribution of the estimators for autoregressive time series with a unit root', Journal of the American statistical association, 74(366a): 427-431.

Dickey, D. A., & Fuller, W. A. 1981. 'Likelihood ratio statistics for autoregressive time series with a unit root', Econometrica: Journal of the Econometric Society, 49(4): 1057-1072.

Elliott, G. & Timmermann, A. 2016. Forecasting in economics and finance. Annual Review of Economics, 8, 81-110.

Epstein, J. M. 2009. Modelling to contain pandemics. Nature, 460, 687-687.

Farooqi, A. 2014. 'ARIMA model building and forecasting on Imports and Exports of Pakistan', Pakistan Journal of Statistics and Operation Research,10(2): 157-168.

Fauver, J. R., Petrone, M. E., Hodcroft, E. B., Shioda, K., Ehrlich, H. Y., Watts, A. G., Vogels, C. B., Brito, A. F., Alpert, T. & Muyombwe, A. 2020. Coast-to-coast spread of SARS-CoV-2 during the early epidemic in the United States. Cell.

Gereffi, G. & Lee, J. 2012. Why the world suddenly cares about global supply chains. Journal of supply chain management, 48, 24-32.

Grosfeld-Nir, A. & Gerchak, Y. 2004. Multiple lotsizing in production to order with random yields: Review of recent advances. Annals of Operations Research, 126, 43-69.

Guha, B. & Bandyopadhyay, G. 2016. 'Gold Price Forecasting Using ARIMA Model', Journal of Advanced Management Science, 4(2), 117-121.

Guha, S. 2020. India in the pandemic age. Indian Economic Review, 1-18.

Hale, G., Kapan, T. & Minoiu, C. 2016.Crisis transmission through the global banking network. Federal Reserve Bank of San Francisco.

Han, P., Wang, P. X., Zhang, S, Y. & Zhu, D, H. 2010. 'Drought forecasting based on the remote sensing data using ARIMA models', Mathematical and Computer Modelling, 51: 1398-1403.

Hochrainer, S. 2009. Assessing the macroeconomic impacts of natural disasters: are there any?, The World Bank.

Hosseini, S., Ivanov, D. & Dolgui, A. 2019. Review of quantitative methods for supply chain resilience analysis. Transportation Research Part E: Logistics and Transportation Review, 125, 285-307.

IDE-JETRO & WTO 2011. Trade patterns and global value chains in East Asia: from trade in goods to trade in tasks. World Trade Organisation, Geneva, Switzerland-2011.

Ivanov, D. 2020. Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case. Transportation Research Part E: Logistics and Transportation Review, 136, 101922.

Jenkins, R. 2018. Globalisation, trade liberalisation and industrial pollution in Latin America. Industry and Environment in Latin America. Routledge.

Kalaitzi, A. S. 2018. The causal effects of trade and technology transfer on human capital and economic growth in the United Arab Emirates. Sustainability, 10, 1535.

Kassa, W. 2020. COVID-19and Trade in SSA: Impacts and Policy Response. World Bank.

Kerivin, H. & Mahjoub, A. R. 2005. Design of survivable networks: A survey. Networks: An International Journal, 46, 1-21.

Khatiwada, S. 2009. Stimulus packages to counter global economic crisis: a review.

Kleinman, A. & Watson, J. L. 2006. SARS in China: prelude to pandemic?, Stanford University Press.

Lamy, P. 2010.Facts and fictions in international trade economics. Speech made at the Conference of trade and inclusive globalization, Paris School of Economics. Paris. April, 2010.

Lavenbach, H. 2017. Why Use ARIMA Models for Demand Forecasting? Delphus, Inc. United States.

Lee, D. 2019. Transmission of domestic and external shocks through input-output network: Evidence from Korean industries, International Monetary Fund.

Luh, D.-L., Liu, C.-C., Luo, Y.-R. & Chen, S.-C. 2018. Economic cost and burden of dengue during epidemics and nonepidemic years in Taiwan. Journal of Infection and Public Health, 11, 215-223.

Mackey, T. K. & Liang, B. A. 2012. Lessons from SARS and H1N1/A: employing a WHO-WTO forum to promote optimal economic-public health pandemic response. Journal of public health policy, 33, 119-130.

Maines, T. R., Jayaraman, A., Belser, J. A., Wadford, D. A., Pappas, C., Zeng, H., Gustin, K. M., Pearce, M. B., Viswanathan, K. & Shriver, Z. H. 2009. Transmission and pathogenesis of swine-origin 2009 A (H1N1) influenza viruses in ferrets and mice. Science, 325, 484-487.

Makin, A. J. 2019. Lessons for macroeconomic policy from the Global Financial Crisis. Economic Analysis and Policy, 64, 13-25.

Mckibbin, W. & Fernando, R. 2020. The economic impact of COVID-19. Economics in the Time of COVID-19, 45.

Mckibbin, W. J. & Sidorenko, A. 2006. Global macroeconomic consequences of pandemic influenza, Lowy Institute for International Policy Sydney, Australia.

Miroudot, S. & Ragoussis, A. 2009. Vertical trade, trade costs and FDI.

Morrison, W. M. 2009. China and the global financial crisis: Implications for the United States.. Library of Congress Washington DC Congressional Research Service.

Ngan, T. M. U. 2016. Forecasting Foreign Exchange Rate by using ARIMA Model: A Case of VND/USD Exchange Rate. Research Journal of Finance and Accounting, 7(12), 38-44.

Noy, I. & Shields, S. 2019. The 2003 Severe Acute Respiratory Syndrome Epidemic: A Retroactive Examination of Economic Costs. Asian Development Bank Economics Working Paper Series.

OECD. 2020. OECD Economic Outlook Volume 2020 issue 1. https://www.oecd-ilibrary.org/sites/87f64769en/index.html?itemId=/content/component/87f64769-en Date of access: 14 Sep 2020.

Petersen, E., Koopmans, M., Go, U., Hamer, D. H., Petrosillo, N., Castelli, F., Storgaard, M., Al Khalili, S. & Simonsen, L. 2020. Comparing SARS-CoV-2 with SARS-CoV and influenza pandemics. The Lancet infectious diseases.

Prideaux, B., Laws, E. & Faulkner, B. 2003. Events in Indonesia: exploring the limits to formal tourism trends forecasting methods in complex crisis situations. Tourism management, 24, 475-487.

Quarantelli, E. L. 1988. Disaster crisis management: A summary of research findings. Journal of management studies, 25, 373-385.

Scheibe, K. P. & Blackhurst, J. 2018. Supply chain disruption propagation: a systemic risk and normal accident theory perspective. International Journal of Production Research, 56, 43-59.

Siddiqui, K. 2017. Globalisation, trade liberalisation and economic development in the developing countries: An overview. Journal of Economics Library, 4, 514-529.

Snyder, L. V. & Daskin, M. S. 2005. Reliability models for facility location: the expected failure cost case. Transportation Science, 39, 400-416.

Snyder, L. V., Atan, Z., Peng, P., Rong, Y., Schmitt, A. J. & Sinsoysal, B. 2016. OR/MS models for supply chain disruptions: A review. Iie Transactions, 48, 89-109.

Song, X., Xiao, J., Deng, J., Kang, Q., Zhang, Y. & Xu, J. 2016. Time series analysis of influenza incidence in Chinese provinces from 2004 to 2011. Medicine, 95.

Stock, J, H. & Watson, M, W. 2015. Introduction to Econometrics. Third edition. United States, Pearson.

Strekalova, Y. A. 2017. Health risk information engagement and amplification on social media: News about an emerging pandemic on Facebook. Health Education & Behavior, 44, 332-339.

Tang, C. S. 2006. Perspectives in supply chain risk management. International journal of production economics, 103, 451-488.

Tindale, L., Coombe, M., Stockdale, J. E., Garlock, E., Lau, W. Y. V., Saraswat, M., Lee, Y.-H. B., Zhang, L., Chen, D. & Wallinga, J. 2020. Transmission interval estimates suggest pre-symptomatic spread of COVID-19. MedRxiv.

Trademap 2019. International Trade Statistics. https://www.trademap.org/Index.aspx? Date of access 5 Sep 2020.

Vandenbussche, H., Connell Garcia, W. & Simons, W. 2019. Global value chains, trade shocks and jobs: an application to Brexit.

Viljoen, W. 2020. South Africa’s April 2020 trade statistics - reduced exports lead to a significant trade deficit. https://www.tralac.org/blog/article/14662-south-africa-s-april-2020-trade-statistics-reduced-exports-lead-to-a-significant-trade-deficit.html Date of access 5 Sep 2020.

Wang, D., Wang, Y., Song, X. & Liu, Y. 2018. Coal overcapacity in China: Multiscale analysis and prediction. Energy Economics, 70, 244-257.

Wankmuller, C. 2020. European disaster management in response to the COVID-19pandemic. Mind & Society.

World Bank. 2018. South Africa Economic Update: Jobs and Inequality, Edition 11, http://pubdocs.worldbank.org/en/798731523331698204/South-Africa-Economic-Update-April-2018.pdf Date of access: 15 Sep 2020.

Yang, Y., Peng, F., Wang, R., Guan, K., Jiang, T., Xu, G., Sun, J. & Chang, C. 2020. The deadly coronaviruses: The 2003 SARS pandemic and the 2020 novel coronavirus epidemic in China. Journal of autoimmunity, 102434.

Yi, K. 2009. The collapse of global trade: the role of vertical specialisation in http://www. voxeu. org/reports. Murky_ Protectionism. pdf.

Zhu, Y., Wang, Y., Liu, T. & Sui, Q. 2018. Assessing macroeconomic recovery after a natural hazard based on ARIMA—a case study of the 2008 Wenchuan earthquake in China. Natural Hazards, 91, 1025-1038.

Zipkin, H. 2000. Foundations of Inventory Systems. Mc Graw Hill, New York.

APPENDIX

Due to many figures in the Appendix, these figures are not included in this journal article but can be requested from any of the authors at any time.